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ABSTRACT

Recently, a model was developed for use in gathering data and making evaluations in a systematic manner. The purpose of this study was to adapt the model for evaluation of the graduates of the teacher preparation program of Tennessee Technological University. A sample of 59 graduates of the teacher preparation program of the university, who were teaching in the schools of Tennessee, was selected. The graduates completed questionnaires about the teacher preparation program, their experiences on the job, and a personality measure. Principals and students of the subjects rated the individuals using three instruments. Especially trained research assistants visited the subjects on two occasions during the 1973-74 school year and gathered data using interaction analysis and other observation techniques. Results of the study indicated that the adapted model could be used for gathering data in a systematic manner about the graduates of the teacher education program. In turn, the data can be used for improving the teacher preparation programs of the university. In general, the results of the application of the model indicated the graduates had many of the characteristics of good teachers as reported in the literature. (Author/JA)

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STUDY OF THE TEACHER PREPARATION PROGRAMS OF

TENNESSEE TECHNOLOGICAL UNIVERSITY

REPORT 74-4

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TENNESSEE TECHNOLOGICAL UNIVERSITY TEACHER EVALUATION MODEL

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July, 1974

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PREFACE

Evaluation of the graduates of teacher preparation programs has been given increased attention in recent years. The need for adequate models for the evaluation of the graduates of any institution is essential for the overall improvement of teacher preparation programs and in turn the teaching of children. There has been agreement among researchers, professional educators, school administrators, and the lay community that teacher preparation programs should be continously evaluated to insure the continued improvement of those individuals entering the teaching profession.

The problems of the evaluation of graduates of teacher preparation programs has been a concern of institutions of higher education for a number of years. With the adoption of the new Standards for the Accreditation of Teacher Education (NCATE) institutions of higher education have focused intensely on the problems of evaluation. In order to comply with the standards imposed by NCATE and to aid in improving the programs of teacher preparation of Tennessee Technological University, an intensive study was initiated in the 1973-74 school year of the graduates of the program. This study was conducted utilizing a modified model that was previously developed for evaluating graduates of teacher preparation programs. It should be pointed out that systematic followup studies have been underway for almost 15 years; however, the present study was designed to provide information in a more systematic manner and more in depth.

The purpose of this report is to present the findings of the first year of the application of an evaluation model to the graduates of the teacher preparation programs of Tennessee Technological University. In turn, this report will be utilized in providing inputs into the total system of teacher preparation. This report is by no means complete; however, it will serve to inform the reader of the basic procedures used and the preliminary findings of the study. Much data has been collected and many hours of computer time have been employed in making various analyses. If the reader desires additional information or analysis of the data in other ways, it is suggested that he contact the author of this report. Also it should be pointed out that the Office of the Administrative Assistant has been involved in a number of separate studies during the past four years that are related to teacher evaluation. A complete listing of these reports is contained in the Appendix of this document, and copies or abstracts of the reports are available from the Administrative Assistant for Special Services of the College of Education.

The author of this report is indebted to the efforts of six individuals that have been involved extensively in working with the

project. These individuals include: Mr. Leroy Bilbrey, Graduate Assistant; Ms. Barbara Louise Duncan, Graduate Assistant; Mrs. Barbara Riddle, Graduate Assistant; Mrs. Catherine Cooper, Secretary; Mrs. Myra Richardson, Secretary; and Dr. John Thomas, Assistant Professor of Educational Psychology and Counselor Education. In addition, thanks are extended to individuals from the D. W. Mattson Computer Center for assistance in processing data and to all principals, teachers, superintendents, and other school personnel that provided technical assistance, data, and allowed the project staff to work with them in various ways.

Jerry R. Ayers,
Administrative Assistant
for Special Services
College of Education
July, 1974

CHAPTER I

INTRODUCTION

The evaluation of the product (the graduates) should be an essential element in teacher preparation programs. For many years industry has applied quality control standards and procedures to the products that are produced. However, due to the complex nature of the human being and all of the variables and unknowns of individual human behavior, evaluation of graduates of teacher preparation programs is far more difficult than dealing with inanimate objects. During the last decade evaluation of the graduates has been limited largely to observations during student teaching experiences, completion of questionnaires after graduation, questionnaires completed by the employers of the graduate, and very limited nonsystematic observations made by the faculty of the teacher preparation program.

Beginning in 1970, with the creation of the Office of the Administrative Assistant for Special Services, a series of separate studies was begun related to the evalutaion of students enrolled in and graduates of the teacher preparation programs of Tennessee Technological University. The research has been, to some degree, systematic and has been designed to answer such questions as course effectiveness, the proper sequence of courses, factors related to achievement, success of the graduates after entering the teaching profession, better methods of instruction, and the degree of achievement of the stated competencies of the teacher preparation program. Reviews of the literature have indicated that only spotty and inadequate studies have been undertaken to evaluate entire teacher education programs. Recently, the success of Sandefur(1) in the development of an evaluation model has opened new avenues in the evaluation of teacher preparation programs. Sandeur(2) has suggested that the evaluation of teacher preparation programs should be accomplished through empirical evidence obtained from teachers in the field.

Adams(3) has completed a pilot study employing Sandefur's teacher evaluation model. In this study, Adams began with teachers who were just completing their senior year and also student teaching. Work has progressed into Phase Two of the evaluation model by conducting a followup of teachers in their first year of employment in the public schools. The work carried out by Adams(4) at Western Kentucky University has indicated that Sandeur's original model has applicability in gathering empirical evidence for evaluating a teacher preparation program.

During the 1973-74 school year several studies were conducted under the general direction of the Office of the Administrative Assistant with aid from other Departments of the College of Education

and from graduate students. To some degree, these studies were continuations of work that was begun in 1970 (see Appendix A for list of reports). This present report is designed to provide information on the major evaluative study that was conducted by the Office of the Administrative Assistant for Special Services during 1973-74. This report will be supplemented by later reports that will be completed during the second and third phases of the project which will be conducted during the 1974-75 and 1975-76 school year. It is anticipated that after 1975-76 the project will be modified and reduced in scope. Approximately three years later (1979-80) the project will be replicated over a three year period.

Purpose

The purposes of the study that is reported in this document include the following:

1. To provide information for faculty and administrators concerned with teacher preparation programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development.

2. To aid in the process of making long range plans for improving the total educational program of the University with particular emphasis on the teacher preparation program.

3. To test the feasibility of implementing a modified version of Sandefur's model for the evaluation of teacher education graduates.

Specific objectives to be accomplished as a part of this study were as follows:

1. To provide a descriptive profile of a sample of graduates of the teacher preparation programs of Tennessee Technological University for the period 1970-73.

2. To determine relationships among selected variables that were measured as a part of the total study.

3. To provide comparisons between the graduates of the teacher preparation programs of Tennessee Technological University with those who might be considered as effective teachers as defined in the original literature of teacher education.

4. To provide for effective dissemination of relevant research data to the faculty and administration of the University associated with the teacher preparation programs.

5. To provide information and suggestions for curriculum evaluation and development based on empirical research data.

6. To evaluate the procedures employed in the study and to make long range plans for implementation of the full evaluation model on a three year cycle.

Limitations

The general limitations for this study are as follows and are primarily concerned with sampling techniques:

1. Subjects for the study were individuals who were graduates of a bachelor's or master's level program at Tennessee Technological University designed to prepare them as teachers during the period 1970-73. (Separate studies have been made of the graduates of the school service personnel programs and the health and physical education program.)

2. Subjects were teaching in the state of Tennessee within a 100 mile radius of Cookeville. (Approximately 70 percent of all graduates of the teacher preparation program of the University, that are teaching, reside within the specified geographical limits of the study.)

3. The subject agreed voluntarily to participate in the study.

4. The principal and the superintendent under whom each subject worked agreed that he could participate in the study.

These limitations were imposed upon the population to make this study more feasible regarding the followup of the subjects. Voluntary participation was deemed necessary due to the extensive collection of data and due to the cooperation required from the subjects for classroom observations and subsequent data collection. Also the limitation of a 100 mile radius of Cookeville, Tennessee was necessary because of the limited travel funds available, the potential shortage of gasoline, and the time available for the graduate assistants to visit in the classrooms of the participating subjects.

The study was further limited to a sample of 59 subjects from the total population of approximately 1400 individuals. An N size of 59 is consistent with the recommendations outlined by Sandefur(5). The collection of classroom observation data was limited to two half-day visits approximately two months apart between January and May of 1974.

Review of the Literature

An extensive review of the literature related to teacher evaluation was made prior to beginning the project. No attempt will be made to summarize this review of the literature. However,

individuals desiring specific information should contact the Office of the Administrative Assistant for Special Services.

Organization of the Study

Chapter I of this report contains a statement of the problem, purpose, and limitations of the study. Chapter II will be devoted to a review of the specific procedures that were employed in pre-planning, selection of the subjects, instrumentation, training of project staff, collection of data, and analysis of data. Chapter III contains a presentation and interpretation of the data divided by major instrument that was employed in the study. Chapter IV consists of the summary, conclusions, and recommendations. Chapter V outlines tentative plans for continuation of the study during the second year of operation. The Appendices attached to this document contain a listing of all evaluative studies that have been conducted by the Administrative Assistant for Special Services and copies of relevant questionnaires and other documentation.

References

1. Sandefur, J. T. An Illustrated Model for the Evaluation of Teacher Education Graduates, Washington: American Association of Colleges for Teacher Education, 1970.

2. Sandefur, J. T. and others. Teaching Experience as a Modifier of Teaching Behavior, U.S. Department of Health, Education and Welfare, Office of Education, Final Report, Cooperative Research Project, No. 8-F-027, 1969.

3. Adams, Ronald D. Western Kentucky University's Teacher Preparation Evaluation Model, Phase I, Cycle I, Annual Report, Bowling Green, Ky: Office of Educational Research, Western Kentucky University, 1972.

4. Ibid.

5. Sandefur, p.31.

CHAPTER II

PROCEDURES

The purpose of this chapter is to provide a detailed description of the procedures employed in collecting the data utilized in this study. These procedures were designed to demonstrate the implementation of a teacher preparation program. This chapter is concerned specifically with pre-planning activities, selection of subjects, implementation, training of project staff, methods for the collection of data, and methods for the analysis of data.

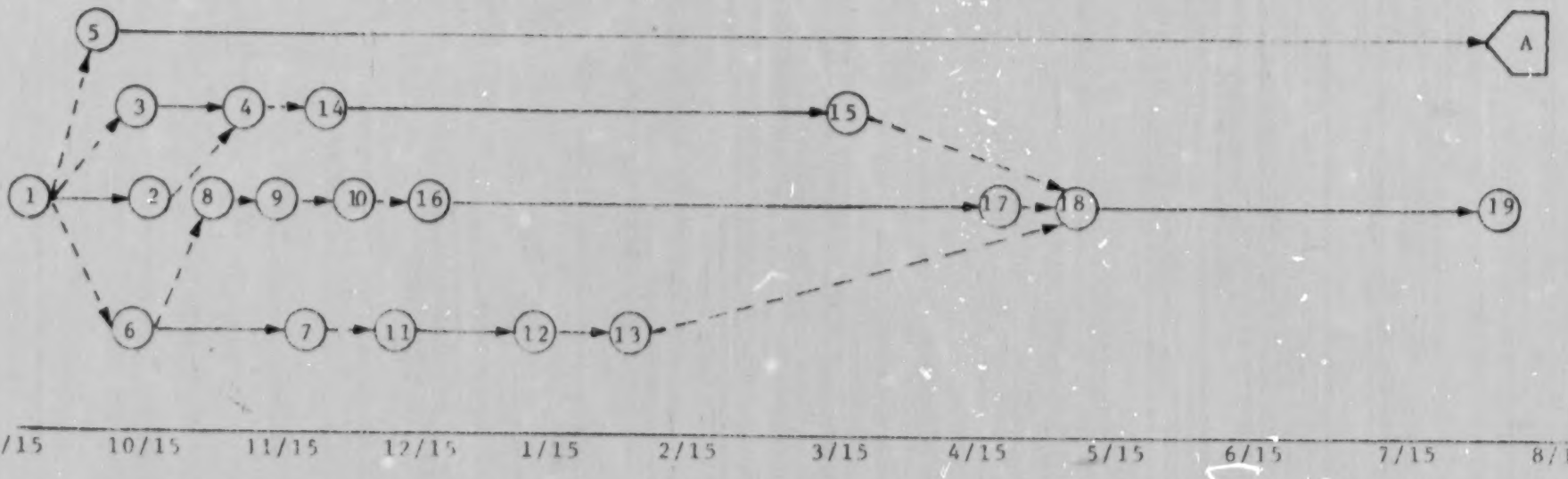
Pre-Planning

Pre-planning sessions were conducted between the Dean of the College of Education, the Administrative Assistant for Special Services, and various faculty members in the College of Education. In addition, information and pertinent data were obtained through first hand visits by the Administrative Assistant and the project staff with Dr. J. T. Sandefur and Dr. Ronald Adams of Western Kentucky University. Additional information relative to the project was gathered through phone conversations and first hand visits with other individuals and through a review of the literature with particular emphasis on the publications of the American Assoication of Colleges for Teacher Education.

A time schedule was prepared in order to meet various deadlines for the completion of activities. Figure 1 shows a PERT chart of the major activities of the project from September 1, 1973 through August 31, 1974.

Selection of Subjects

The population for this study was defined as those individuals who completed the B. S. in one of the several teacher preparation programs of the University or individuals who completed the M. A. with major emphasis in teaching (individuals completing degrees in such areas as Counselor Education, Administration, Supervision, or student personnel services were excluded from the study) from 1970 through 1973. Since 1970 the Office of the Administrative Assistant for Special Services has conducted routine followup surveys of all individuals who completed the B. S. or M. A. with emphasis in teacher education. Reports of these followup studies have been prepared (a list is contained in the Appendices). A survey was made of the records from these earlier surveys to ascertain the number of individuals who were teaching within the defined geographical limits of the project. A total of 289 individuals out of a total



SUMMARY OF ACTIVITIES 1973-74

1-2 Survey of Literature
3-4 Training of Observers
5-- Continuing Contact With Other Projects
6-7 Mail Followup to 1973Graduates
8-9 Select Sample for Intensive and Contact With Reagrd to Study
9-10 Finalize Observation Schedule and Compile Data on Subjects
11-12 Mail Questionnaires to 1973 Employers
12-13 Compile Report of 1973 Graduates
14-15 Special Studies on HPED Graduates and School Service Personnel
16-17 Observation of Graduates and Compiling of Data
18-19 Complete Data Analyses and Report on 1973-74 Work and Make Plans for 1974-75

Figure 1. PERT Chart of Major Activities of Project During 1973-74.

population of approximately 1,250 met the criteria. It should be pointed out that some of the records were as much as three years old.

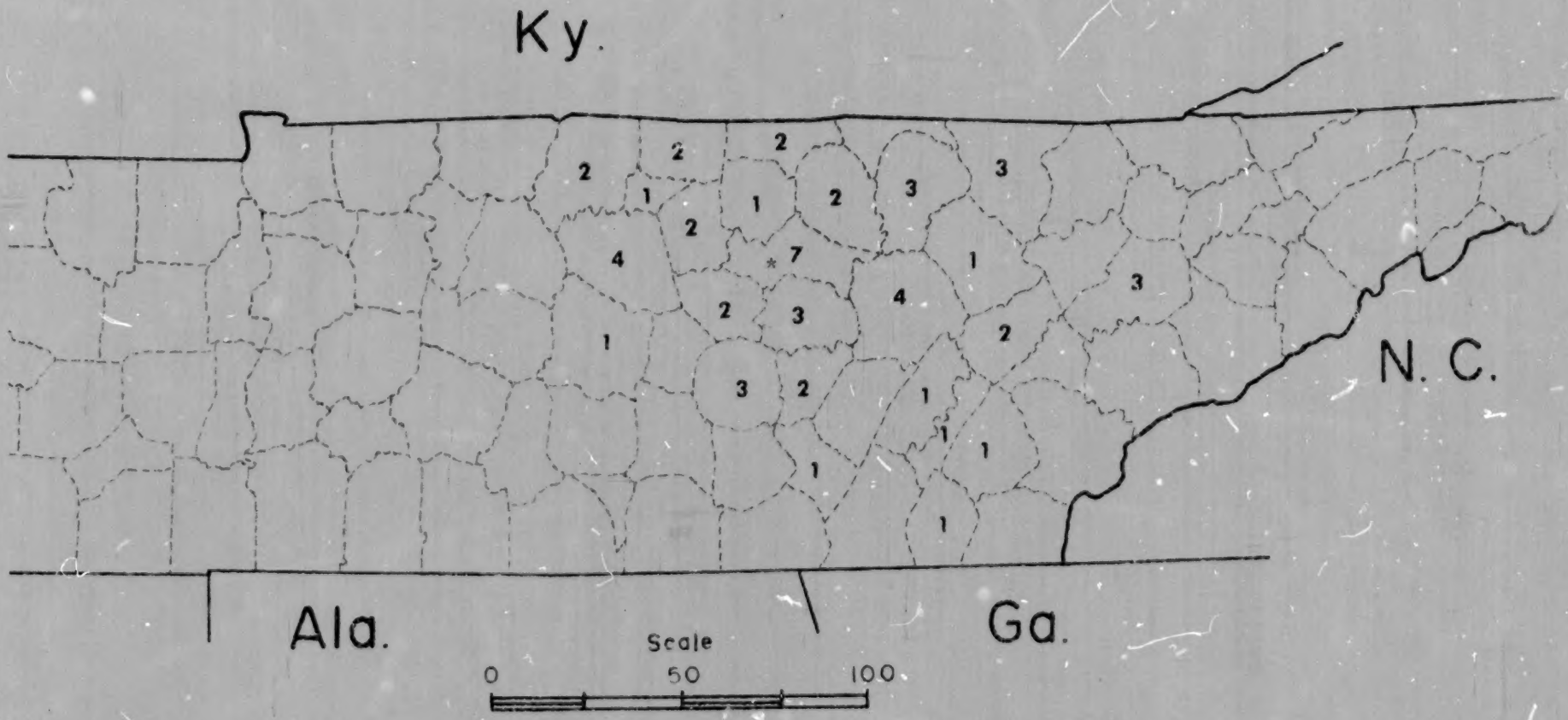
A questionnaire was sent to these individuals explaining the project and asking their cooperation in carrying out the study. Also a survey form was sent to all 1973 graduates. This basic followup form (see Appendix) has been used since 1970. Upon receipt of the completed questionnaires those individuals who met the geographical criteria were included in the study. After contacting principals and superintendents and making a very detailed analysis of the individuals involved, a sample of 59 graduates of the teacher preparation program was selected for intensive followup evaluation. Figure 2 shows a map of selected portions of Tennessee. The numerals within each county indicated the number of individuals who were included in the study (the numbers include both county and city systems). Table 1 shows a distribution of the number of individuals by year of graduation, their primary teaching assignment, and whether they had completed a bachelor's or a master's degree from the University. It is obvious that there are many limitations associated with the type sampling procedure used; however, it should be pointed out that the nature of the study requires individuals who volunteer to participate and also principals and superintendents who are willing for their teachers and students to be involved in a study of this nature.

Instrumentation

Instruments and records used for data collection consisted of five general types: general information questionnaires, a personality scale, rating scales, direct classroom observational scales, and data from each subject's University transcripts. These instruments were selected to parallel the recommendations of Sandefur(2) and Adams(3) and on the basis of their merit as research tools, contributions of the data that could be collected to the objectives of the study, their methods of administration, availability for obtaining the required data, and minimal training required for administration of the instruments. Following is a brief description of each instrument or major category of data collection.

General Information Questionnaires

A questionnaire designed to obtain base line data and graduate's ratings of the teacher preparation program (originally developed in 1970 and modified through several successive editions) was administered to all subjects in the study. Two forms of the instrument were used and included a questionnaire designed for individuals receiving the bachelor's degree (Appendix B) and an instrument designed for those individuals who have completed the M. A. program (Appendix C). These instruments had been previouly completed by the subjects in the study; however, subjects who had completed the



* Cookeville, Tennessee--Location of Tennessee Technological University

Figure 2. Distribution of Subjects in Study by County in Which Teaching.

TABLE 1

Sample for Intensive Followup 1973-74*

Year	K	1-3		4-7	8-12	Sp.Ed.	Total	Eng.	Sci.	Hist.	Bus.Ed.	Math	H.Ec.	P.E.	Oth.
1973	0/2	0/7	3/1	0/2	1/6	0/0	4/18	0	0	1	0	0	0	2	0
1972	0/6	0/2		0/5	0/4	0/2	0/19	1	1	2	1	0	2	0	3
1971	0/2	0/1		0/2	0/6	0/1	0/12	3	0	0	1	1	0	0	2
1970	0/0	0/2		0/1	0/3	0/0	0/6	1	1	2	0	0	0	0	0
Total	0/10	0/12	3/1	0/10	1/18	0/3	4/55	5	2	4	2	1	2	2	5

*No. MA/NO. BA

instrument prior to the fall of 1972 were asked to complete a new instrument. The instrument, designed for those individuals completing the bachelor's degree, contains items that provide information concerning demographic data, professional data, employment history, and ratings of ten broad areas related to their teacher preparation program. The instrument, used with those individuals completing the M. A., was designed to gather similar information as described above. Fill in the blank and check the appropriate response type of items are used on the instrument to facilitate subject completion of the questionnaire.

Permanent Records and Transcript Information

Complete transcripts of each subject's grades were obtained from the Office of Admissions and Records. Also the records of the College of Education were reviewed to locate part and total scores from the National Teacher Examination (completed by each subject during their senior year), and the hours of credit and QPA earned by each subject in social science, science, mathematics, English, Professional Education and Psychology courses, and major field of study. In addition, an overall quality point average was obtained for each subject. It should be noted that only the overall QPA's were obtained for individuals who had completed the master's degree. Scores were also obtained from the Brown Holtzman Survey of Study Habits and the Kuder Preference Record. These two measures were administered to all subjects while they were in their freshman year.

Principal's Evaluation of Subjects

Principals of the subjects were asked to complete two questionnaires. The Principal's Questionnaire (Appendix D) was originally developed by the Office of the Administrative Assistant for Special Services in 1970 and parallels the followup questionnaire for B. S. graduates (Appendix B) relative to various areas of the teacher preparation program. Each principal was asked to rate each subject on 59 categories on a scale of 1-5 (very unsatisfactory to very satisfactory).

Each subject's principal was also asked to complete the Teacher Evaluation by Supervisor Form. This instrument is a modification of an instrument originally designed at Kansas State Teacher's College (4). This form allowed the principal to rate the subject on a scale from 1-5 on four areas of teacher behavior including: 1) subject matter competencies, 2) relations with students, 3) appropriateness of assignments and academic expectations, and 4) overall classroom effectiveness. A copy of the Teacher Evaluation by Supervisor form is contained in Appendix E.

Personality Scale

The California F-Scale, Forms 45 and 40, was developed by Adorno, et. al.(5), to measure individual prejudices and anti-democratic tendencies. The 28 item instrument relates to opinions regarding a number of social groups and issues about which some people agree and others disagree. The subjects were asked to respond to each item on a six point scale ranging from strong opposition (disagree) to strong support (agreement). Reliability of the F-Scale was determined by Adorno(6) as .90. A copy of the instrument is contained in Appendix F.

Student Evaluation of Teaching

The Student Evaluation of Teaching (SET) was developed by Veldman and Peck(7) and was utilized to obtain ratings from pupils concerning five dimensions of teacher behavior. Veldman(8) has described these dimensions as: "1) friendly and cheerful, 2) knowledgeable and poised, 3) lively and interested, 4) firm control, and 5) non-directive (democratic procedure)." Data from this instrument were obtained from pupils of subjects teaching in grades three and above. No suitable instrument could be found to be used with pupils below grade three. Appendix G contains a copy of the set.

The set was scored in the following manner:

1. The responses were assigned values of 1-4 where one was very much true.

2. Means of each of the ten items were computed and item means were multiplied by a factor of 100.

3. The refined scores were then paired according to the dimensions they were measuring.

Item 1 with Item 6	Friendly and Cheerful
Item 2 with Item 7	Knowledgeable and Poised
Item 3 with Item 8	Lively and Interested
Item 4 with Item 9	Firm Control
Item 5 with Item 10	Non-Directive

The mean was then found for each dimension.

4. In addition to scores in the five dimensions, a composite score was obtained by finding the mean of all ten means.

Classroom Observational Systems

Two classroom observational systems were employed in this study. Following is a description of these two direct classroom observational systems.

Classroom Observation Record. The Classroom Observation Record developed by Ryans(9) was used to access four dimensions of pupil behavior and 18 dimensions of teacher behavior. A seven scale interval was used to rate each of the pupil and teacher behavior dimensions with an N category for dimensions not observed (the observers circled the appropriate rating for each dimension immediately after each days observation period). For purposes of this study only the first classroom observational scores have been used. Appendix H contains a copy of the rating form and a detailed description of each dimension of pupil and teacher behavior measured.

Interaction Analysis. A ten category interaction analysis system was utilized to record observed classroom behavior. This system was suggested by Sandefur and is basically the system of interaction analysis described by Amidon and Flanders(10). Seven categories of teacher talk, two categories of student talk, and one non-verbal category were utilized by observers to record classroom behavior. The observers recorded a numerical value cooresponding to a particular category every three seconds or every time the categories changed. Thus, an objective record was obtained of the variable interaction within the classroom. Two to three 20 minute observations per subject were recorded for this study on two occasions approximately 8-9 weeks apart. The initial observations were made in January or February of 1974 with the second set of observations being made in March, April, or early May.

Table 2 shows a summary of the ten categories employed in the study. This table has been taken directly from Amidon and Flanders(11). It will be noted that under the categories of teacher talk there are two major categories - indirect influence containing four sub-categories and direct influence containing three subcategories. Frequencies for each category were tallied and a 10x10 matrix was determined for statistical treatment. Five measures of classroom behavior were obtained from the data collected by interaction analysis. Appropriate categories were combined and ratios computed to determine the following measures:

1.	I/D	Indirect to Direct ratio = Categories 1, 2, 3, 4, divided by Categories 5, 6, 7
2.	i/d	Revised indirect to direct ratio = Categories 1, 2, 3 divided by Categories 6, 7
3.	ST/TT	Student Talk to Teacher Talk = Categories 8, 9 divided by Categories 1, 2, 3, 4, 5, 6, 7
4.	Sil/Tot	Silence to Total Teaching = Category 10 divided by Categories 1, 2, 3, 4, 5, 6, 7

Table 2

Summary of Categories for Interaction Analysis[a]

TEACHER TALK	INDIRECT INFLUENCE	1.[b] ACCEPTS FEELING: Accepts and clarifies the feeling tone of the students in a non-threatening manner.
		2.[b] PRAISES OR ENCOURAGES: Praises or encourages student action or behavior.
		3.[b] ACCEPTS OR USES IDEAS OF STUDENTS: Clarifying, building, or developing ideas suggested by a student.
		4.[b] ASKS QUESTIONS: Asking a question about content or procedure with the intent that a student answer a question.
	DIRECT INFLUENCE	5.[b] LECTURING: Giving facts or opinions about content or procedures.
		6.[b] GIVING DIRECTIONS: Directions, commands, or orders with which a student is expected to comply.
		7.[b] CRITICIZING OR JUSTIFYING AUTHORITY: Statements intended to change student behavior from non-acceptable to acceptable patterns.
STUDENT TALK		8.[b] STUDENT TALK-RESPONSE: Talk by students in response to teacher.
		9.[b] STUDENT TALK-INITIATION: Talk by students, which they initiate.
		10.[b] SILENCE OR CONFUSION: Pauses, short periods of silence and periods of confusion.

[a]Amidon, Edmund J. and Ned A. Flanders. The Role of the Teacher in the Classroom. A Manual for Understanding and Improving Teacher Classroom Behavior. Minneapolis: Association for Productive Teaching, 1971, p. 14.

[b]No scale is implied by the number 1 through 10. Each number is classificatory and is designed to denote a particular kind of communication event.

5. Lec/Tot — Lecture to Total Teaching = Category 5 divided by Categories 1, 2, 3, 4, 5, 6, 7

A t-test was computed between the two sets of observations for each of the five categories to determine if there was a difference in the mean ratios.

Training of Observers

Three observers were utilized to collect the data presented in this study. In addition, two secretaries assisted in the codification and categorization of all collected information. Three graduate students from the Office of the Administrative Assistant for Special Services were trained in the use of interaction analysis techniques and the Classroom Observation Record. In addition, a consultant from the Department of Educational Psychology and Counselor Education of the College of Education worked with the three graduate assistants in an informal training program. A series of practice sessions were held over a four week period in the Fall of 1973 utilizing audio tape recordings, films, and live observations. Observations were made in the Tech Campus School, Cookeville Junior High School, and Cookeville Senior High School. The training procedures for learning interaction analysis were outlined by Amidon and Flanders(12). These procedures included the memorization of categories, practicing coding and recording and discussion of types of behavior as related to the categories.

Training in the use of the Classroom Obervation Record consisted largely of studying the items and glossary of terms and observing live teaching situations and discussing the teaching behavior to obtain a common point of reference for rating. Practice sessions were conducted parallel with those related to learning interaction analysis.

Reliability coefficients were computed at two day intervals to provide a progress check on inter-observer reliability. The Scott coefficient recommended by Flanders(13) was used to determine inter-observer reliability for a 20 minute interaction analysis recording session.

Inter-observer reliabilities for this study were on the order of magnitude of .85 to .90. Intercorrelations of ratings of the Classroom Observation Record were on the order of .75. The values are within the limits suggested by Sandefur(14), i.e., .75 for inter-observer reliability coefficients for observational instruments.

Collection of Data

Data for this study were collected by mail surveys, interviews and observations in the classroom. Initially, all subjects were

contacted by mail, and dates were set for observational visits by the graduate students. These dates were verified with the appropriate administrative authorities in each school and school system. A letter explaining the project in detail was sent to all subjects. The subjects, their principals, and superintendents were invited to make comments and suggestions for conducting the study.

Each subject was visited on two occasions by the trained graduate assistants. On the day of the initial visit the subjects who had not completed a questionnaire related to their experiences at Tech since September of 1972 were asked to complete an additional form at their leisure and to return the questionnaire in a business reply envelope. On the day of the initial visit the observer spent approximately one-half day in the classroom of the subject. Interaction analyses were made during three 20 minute periods. At the completion of all observations the Classroom Observation Record was completed.

The Student Evaluation of Teaching was administered during an appropriate time during the first half-day's visit. The Student Evaluation of Teaching was employed with children from grades 3-12. Pupils were instructed on how to complete the form and requested not to sign their names. For grades three and four each item was read to the students before they circled the responses. Pupils were assured that the information would be kept confidential. While the students were completing the Student Evaluation of Teaching the subject completed the California F-Scale.

During the course of the day the observer interviewed each subject with regard to their opinions and ideas of the teacher preparation program of the University. This information has been summarized and is contained in a Chapter III of this report.

While the observers were in each school, each principal was asked to complete the Principal's Questionnaire and also the Teacher Evaluation by Supervisor Form. These forms were picked up at the conclusion of the day in the school.

During the second visit the interaction analysis technique and the Classroom Observation Record were employed. In addition, the subjects of the study were given limited feedback information relative to their responses, ratings, etc., that were obtained during the first visit. Any additional information that was missing such as the Student Evaluation of Teaching or Principals Ratings were obtained during this visit.

Analysis of Data

Data obtained in this study were classified, coded, and keypunched for analysis. Descriptive statistics to include means, standard deviations, frequency counts, and intercorrelations were obtained using appropriate programs available through the D. N.

Mattson Computer Center. All data collected were placed on IBM cards and stored for additional analysis. Also a coding format document was prepared to accompany the data base.

The primary purpose of this study was to provide information for faculty and administrators concerned with teacher preparation programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development. Thus, with this in mind only limited analyses of the data have been performed. This report will be presented to the faculty and administors of the University to acquaint them with the project and the data that is available. In turn, it is anticipated that each department or individual will be asked to request information above and beyond what is provided in this report. It will be the responsibility of each faculty member to request additional analysis of data in order to further the study in an area that would be of specific interest to him, make suggestions for additional variables not measured and/or the deletion of variables not considered useful, and to make suggested approaches for the modification of the preparation program to bring about changes in the behavior of graduates to correspond to the desired behavioral objectives of the teacher preparation program of the University.

Summary

In summary this chapter has presented an overview of the procedures and methodology used in conducting the study of the Tennessee Technological University Evaluation Model. It is felt that the information available will be useful to those individuals attempting to replicate this study. It should be pointed out that additional information and specifics related to the methodology employed in this study are available from the Office of the Administrative Assistant for Special Services.

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CHAPTER III

PRESENTATION AND ANALYSIS OF DATA

Chapter III contains a presentation and analysis of data which are pertinent to the problem being investigated. Means, standard deviations, and/or frequency counts and correlations are presented in tabular form for all of the variables studied. Explanatory information is included to facilitate the reader's understanding and usage.

The data are present in nine parts with each section corresponding to a major instrument used to gather data. Each section contains summary satistics as well as a discussion of the relevant variables that were correlated in the study. An intercorrelation matrix of 55 selected variables appears as an attachment to the back of this report. No attempt was made to show a complete matrix with all variables. Only variables significant at or beyond the .05 level will be discussed in this chapter.

An understanding of Chapters I and II of this report is essential for the effective utilization of Chapters III and IV. An understanding of Chapter II and the instruments (see Appendices) utilized to measure the variables is essential to obtain information of specific interest. The preliminaries of this report contain a List of Tables, a List of Figures, and a List of Appendices which will aid the reader in locating statistical information.

Career Base Line Data

This section contains a summary of preliminary career base line data for the subjects in this study. Also included in this section is information taken from each subject's transcript and other records available in the College of Education. The data presented in this section appear to be representative of information taken from other studies that have been carried out in the College of Education.

Table 3 shows a summary of the year of graduation for the 54 subjects in the study. It will be noted that five subjects were not included in the results of the study, as it was not possible to collect sufficient data on these individuals or they dropped out of the study for one or more reasons.

A summary of the years of teaching experience of the subjects is shown in Table 4. The school year 1973-74 is included in the Table as one full year of teaching. Twenty-eight individuals were in their first year of teaching and on the other extreme three individuals had nine or more years of classroom experience. The mean

Table 3

Year of Graduation of Subjects in Study[1] (N=54)

Year	Bachelor's Degree		Master's Degree	
	No.	Percent	No.	Percent
1970	4	8.0	0	0.0
1971	11	22.0	0	0.0
1972	19	38.0	1	25.0
1973	16	32.0	3	75.0
Total	50	100.0	4	100.0

[1]Individuals receiving both the B.S. and M.A. during the time period are included only once under Master's degree.

Table 4

Years of Teaching Experience of Subjects[1]

Number of Years	Bachelor's Degree		Master's Degree	
	No.	Percent	No.	Percent
1	28	56.0	0	0.0
2	9	18.0	3	75.0
3	6	12.0	0	0.0
4	3	6.0	0	0.0
5	0	0.0	0	0.0
6	0	0.0	0	0.0
7	1	2.0	0	0.0
8	0	0.0	1	25.0
9 or more	3	6.0	0	0.0

[1]1973-74 school year as a full year of teaching experience.

years of experience for those individuals who had completed their Bachelor's and Master's degree was respectively 2.2 years and 3.5 years.

An examination of the correlation pattern of the years of experience (see Correlation Matrix, Variable 54) revealed significant correlations with several variables. A correlation of -.327 was noted between the years of experience and the Social Studies test of the NTE and significant positive correlations between years of experience and major field and overall quality point averages. Significant positive correlations were also noted between years of experience and items 1, 4, 5, 6, 12, 13, and 22 of the Classroom Observation Scale. This might be interpreted as meaning that the pupils of more experienced teachers are more alert and initiating in their activities. This might further indicate that teachers with greater experience in the classroom are more fair, democratic, alert and attractive and have a broader base of behavior than less experienced teachers.

Table 5 shows the level of teaching of the 54 subjects in the study. It will be noted that the majority of the teachers were teaching in kindergarten through the third grade. Therefore, some bias has been introduced into the study since it is estimated that about 50 percent of the graduates of the teacher preparation program are teaching in grades 7 through 12. Also, only in the last three or four years has emphasis been placed on statewide kindergarten programs for all children in the State of Tennessee. The mean grade level of teaching for the group was approximately grade four. It should be noted that ten individuals were teaching out of their area of certification. In most cases an individual holding certification in home economics was teaching general science or an individual with emphasis in sociology was teaching English.

Table 5

Teaching Level of Subjects (n=54)

Level	Bachelor's Degree		Master's Degree	
	No.	Percent	No.	Percent
Preschool (includes K)	10	20.0	1	25.0
Grades 1-3	13	26.0	0	0.0
Grades 4-6	8	16.0	1	25.0
Grades 7-9	8	16.0	0	0.0
Grades 10-12	9	18.0	0	0.0
Other (includes special classes)	2	4.0	2	50.0

In an effort to determine if any relationships existed between the grade level and the various variables used in the study, the grade levels were combined and a number assigned as follows: Kindergarten=1, Grades 1-3 = 2, Grades 4-6 = 3, etc. In turn these numbers were used in computing correlations (see Correlation Matrix, Variable 55). Significant positive correlations were noted between grade level and Weighted Subtotal and Weighted Commons scores from the NTE. It has been noted in other unpublished studies made in the College of Education, that in general secondary majors have generally higher NTE scores than elementary majors. A correlation of -.583 was noted between the Firm Control factor of the Student Evaluation of Teaching and grade level. This would indicate that students in the upper grades felt that the teachers did not exercise firm control in the classroom. A positive correlation of .441 was noted between grade level and the Non-Directive factor of the Student Evaluation of Teaching, indicating that older students perceived the teachers as being less directive than younger students. Also a positive correlation was found between the Lecture to Total Teaching Ratio of the interaction analysis evaluation and grade level. As one moves through the grades, significantly more lecturing is being used.

The primary area of certification of the subjects is shown in Table 6. Approximately 44 percent were certified at the elementary level, 46 percent at the secondary level and 10 percent in Health and Physical Education (a 1-12 level of certification).

Table 6

Primary Area of Certification of Subjects[1] (N=54)

Year	Bachelor's Degree		Master's Degree	
	No.	Percent	No.	Percent
Elementary	23	46.0	1	25.0
Secondary	23	46.0	0	0.0
Health and Physical Education	4	8.0	3	75.0
Total	50	100.0	4	100.0

[1]Individuals receiving both the B.S. and M.A. during the time period are included only once under the Master's degree.

The mean number of hours of credit and quality point average earned in social science, science, mathematics, English, education

and psychology, and major teaching field and overall quality point average are shown in Table 7. The information presented in this table is based only on the subjects who had completed the Bachelor's degree. The data presented closely parellels the results of a study of 603 graduates of the teacher preparation program of the University(1). It should be noted, however, that subjects in this study attained slightly lower quality point averages (about .20 points) in mathematics and a slightly higher quality point average (about .40 point) in English than did those subjects in the former study.

Table 7

Undergraduate College Record (N=49)

Subject Matter Area	No. Hours Credit		QPA	
	Mean	S.D.	Mean	S.D.
Social Science	25.73	18.38	2.29	0.84
Science	18.73	13.98	2.21	1.00
Mathematics	8.88	8.27	2.43	0.94
English	18.38	11.09	2.89	1.56
Education and Psychology	33.98	13.95	3.00	0.85
Major Teaching Field	56.85	17.50	2.90	0.53
Overall QPA	-	-	2.92	0.40

For purposes of correlation (see Correlation Matrix, Variables 13-15) only the quality point averages from Education and Psychology and the Major Field and overall quality point average have been included. As would be expected, high positive correlations were noted between the three means and various parts and subtests of the NTE. These correlations were similar to the ones reported by Ayers and Rohr(2). Positive correlations were noted between the Education and Psychology quality point average and the Relations With Students Factors of the Principals Evaluation and with the Friendly and Cheerful, Knowledge and Poise, and Non-Directive factors of the Student Evaluation of Teaching. This would indicate that students who had achieved at a higher level in core education and psychology courses were better able to relate to students. A positive correlation between major field quality point average and the F-Scale and years of experience was noted. Subjects who achieved higher quality point averages in their major field tended to be more authoritarian and had completed more years of teaching experience. A negative

correlation was found between major field quality point average and Item 18 of the Classroom Observation Record. In this instance subjects who had achieved a higher quality point average tended to be disorganized. Positive correlations were found between overall quality point average and years of experience and the Indirect to Direct (I/D) ratio of the interaction analysis evaluation. It appeared that subjects with higher overall quality point averages were using more indirect than direct teaching methods in their classrooms.

Table 8 shows the means and standard devivations for the scores achieved by 21 subjects on the Kuder Preference Record. The Kuder is normally completed by students during their freshman year at the University. The results are similar to those obtained with larger groups of subjects(3). Because of the size of the sample and the usefulness of the data, no attempts were made to analyze the data further.

Table 8

Means, and Standard Deviations of Scores from the Kuder Preference Record (N=21)

Subtest	Mean	S.D.
Kuder V	43.86	11.60
Kuder 0	39.67	17.01
Kuder 1	26.43	12.61
Kuder 2	20.29	8.52
Kuder 3	32.24	10.57
Kuder 4	34.81	12.07
Kuder 5	31.10	9.79
Kuder 6	23.76	16.33
Kuder 7	17.14	14.47
Kuder 8	58.81	9.85
Kuder 9	47.76	11.94

Mean scores achieved by 45 subjects on the National Teacher Examinations are shown in Table 9. The results are comparable with the scores achieved by other groups of students at the University (4,5). It should be noted that some error has been introduced in this analysis, since scores from various administrations of the NTE over a four year period have been combined. Overall, however, the subjects ranked at about the 45th percentile on the composite score of the test.

Table 9

National Teacher Examinations Scores (N=45)

Test	Mean	S.D.
Advisory Part Scores		
Social Studies	5.49	0.96
Language and Fine Arts	5.26	0.85
Science	5.71	0.94
Mathematics	5.63	0.93
Teaching Area Examination	590.20	68.32
Professional Education Test	216.94	31.71
Commons Examination		
Written English	55.57	7.97
Social Studies, Literature and Fine Arts	53.53	8.16
Science and Mathematics	56.16	9.06
Wt. Subtotal	335.35	41.91
Wt. Common	552.29	67.28
Composite	1139.54	113.98

The inter-correlational patterns of the various subtests of the NTE are similar to those reported by Ayers and Rohr(6). For purposes of this report only the relationships of the Professional Education Test, Teaching Area Examination and Composite score of the

NTE with other variables will be discussed (see Correlation Matrix, Variables 5, 6 and 12). A positive relationship was found between the Professional Education Test and the Knowledgeable and Poised Factor of the Student Evaluation of Teaching. This would tend to indicate that subjects who achieved higher on the Professional Education Test of the NTE tended to be more knowledgeable and poised than other subjects. A significiant positive relationship was found between scores on the Teaching Area Examination and the Lecture to Total Teaching ratio of the interaction analysis evaluation and a negative relationship with Item 5 of the Classroom Observation Record. In general, subjects with higher scores in their major teaching field tended to lecture more and to be more partial toward certain students in their classroom. Significant negative relationships were noted between composite NTE scores and the Indirect to Direct (I/D) ratio of the interaction analysis evaluation and the Firm Control Factor of the Student Evaluation of Teaching. A positive relationship was noted between composite NTE scores and the Silence to Total Teaching ratio of the interaction analysis evaluation.

General Information-Teacher Preparation Inventory

All subjects were asked to complete a rating sheet with regard to certain courses and other areas of emphasis related to their teacher preparation program. Separate questionnaires were used with Bachelor's and Master's level individuals. Because of the small number of subjects at the Master's level (N=4) these data have not been included in the report.

Data were obtained from 47 of the Bachelor's level graduates centered on their rating of 57 items related to the objectives of the teacher preparation program. The results obtained with this limited sample are comparable to the results obtained in studies using larger numbers of graduates (7, 8, 9, 10, 11). Table 10 shows the results of the survey conducted as a part of the study reported in this document. This Table shows the percentage of subjects ratings of each area and the mean and standard deviations of their ratings. In general the lowest ratings were given to the areas of (a) ability to work with members of the community, (b) ability to work with parents, (c) general knowledge and understanding of the physical sciences, (d) general knowledge and understanding of mathematics, (e) skill in working with exceptional children, and (f) ability to use English. Based on the subjects ratings, potential weaknesses of the teacher preparation program can be identified.

The subjects were asked to rate the value of certain core education and psychology courses on a scale of 5 to 1 (very satisfactory to very unsatisfactory). Table 11 shows the results of this phase of the study. The courses receiving the lowest ratings were Introduction to Teaching, Social Foundations, and History and Philosophy of Education. Significant changes have been made in these courses in the past two years. The resulting changes have

Table 10

Percentage Ratings, Means, and Standard Deviations of Ratings of Selected Items Related to Undergraduate Teacher Preparation Program (N=47)

Item	1 Very Unsatisfactory	2 Somewhat Unsatisfactory	3 Neither satisfactory nor Unsatisfactory	4 Somewhat Satisfactory	5 Very Satisfactory	Blank	$\bar{X}$	S.D.
1. Your teaching personality:								
a. Ability to work with children	2.0	8.0	4.0	32.0	30.0	24.0	4.05	1.06
b. Ability to work with colleagues	2.0	2.0	10.0	32.0	30.0	24.0	4.13	0.93
c. Ability to work with members of the community	0.0	14.0	12.0	30.0	20.0	24.0	3.74	1.06
d. Ability to maintain a friendly disposition	2.0	2.0	14.0	26.0	30.0	26.0	4.08	0.98
e. Ability to lead a well-rounded life, to enjoy work and play	2.0	4.0	12.0	30.0	26.0	26.0	4.00	1.00
f. Ability to work with parents	8.0	2.0	18.0	24.0	22.0	26.0	3.68	1.25
2. Your general knowledge and understanding of:								
a. The physical sciences	4.0	4.0	14.0	42.0	12.0	24.0	3.71	0.98
b. The biological sciences	0.0	0.0	12.0	42.0	22.0	24.0	4.13	0.66
c. American culture and institutions	2.0	4.0	12.0	38.0	20.0	24.0	3.92	0.94
d. Art, music, literature, philosophy	0.0	8.0	12.0	32.0	24.0	24.0	3.94	0.96
e. Mathematics	6.0	4.0	14.0	34.0	16.0	26.0	3.68	1.13
3. Your ability to use the English language effectively	0.0	4.0	10.0	28.0	34.0	24.0	4.21	0.87
4. Your knowledge and understanding of the subjects which you teach	0.0	2.0	4.0	34.0	34.0	26.0	4.35	0.72
5. Your understanding of children and youth:								
a. Insight into causes of behavior	2.0	4.0	6.0	34.0	28.0	26.0	4.11	0.97
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	2.0	6.0	12.0	40.0	14.0	26.0	3.78	0.95
c. Skill in group work	0.0	0.0	10.0	44.0	20.0	26.0	4.14	0.63
d. Skill in maintaining discipline	6.0	6.0	16.0	24.0	22.0	26.0	3.68	1.23
e. Skill in guidance of children	0.0	2.0	10.0	50.0	12.0	26.0	3.97	0.65

Table 10, Continued

6. Your understanding of the nature of the learning process:								
a. Skill in helping students determine objectives	0.0	0.0	20.0	40.0	14.0	26.0	3.92	0.68
b. Skill in motivating students	0.0	6.0	8.0	38.0	22.0	26.0	4.03	0.87
c. Skill in pupil-teacher planning	0.0	2.0	14.0	38.0	20.0	26.0	4.03	0.76
d. Skill in using a variety of teaching methods	0.0	6.0	4.0	34.0	26.0	30.0	4.14	0.88
e. Skill in evaluating pupil growth and class procedures with pupils	0.0	6.0	8.0	38.0	22.0	26.0	4.03	0.87
f. Ability to construct appropriate tests and learning materials	0.0	6.0	14.0	36.0	20.0	24.0	3.92	0.88
g. Skill in the application of learning theory in the classroom	0.0	10.0	18.0	36.0	12.0	24.0	3.66	0.91
h. Skill in providing differentiated learning experiences for various groups and individuals	0.0	8.0	16.0	34.0	18.0	24.0	3.82	0.93
7. Your knowledge of sources of teaching materials:								
a. Printed materials	0.0	4.0	6.0	36.0	30.0	24.0	4.21	0.81
b. Audio-visual materials	0.0	2.0	8.0	32.0	34.0	24.0	4.29	0.77
c. Community resources	2.0	0.0	20.0	32.0	22.0	24.0	3.95	0.90
d. Library and library materials	2.0	2.0	6.0	34.0	32.0	24.0	4.21	0.91
8. Your ability to use teaching materials effectively	0.0	0.0	2.0	48.0	24.0	26.0	4.30	0.52
9. Your knowledge and understanding of:								
a. The purposes of the school in relation to the overall purpose of society	0.0	4.0	10.0	30.0	30.0	26.0	4.16	0.87
b. The social structure of the community and its meaning for education	0.0	4.0	8.0	32.0	30.0	26.0	4.19	0.84
c. The institutions of the community	0.0	4.0	10.0	30.0	30.0	26.0	4.16	0.87
d. The different value-patterns of social-economic classes	0.0	6.0	8.0	28.0	32.0	26.0	4.16	0.93
e. The economic life of the community	2.0	2.0	12.0	32.0	26.0	26.0	4.05	0.94
f. Appropriate ethical behavior of the teacher	2.0	8.0	2.0	28.0	32.0	28.0	4.11	1.09

Table 11

Percentage Ratings, Means, and Standard Deviations of Ratings of Selected Courses in Undergraduate Program (N=47)

Item	Very Unsatisfactory 1	Somewhat Unsatisfactory 2	Neither Satisfactory nor Unsatisfactory 3	Somewhat Satisfactory 4	Very Satisfactory 5	Did Not Teach At TTU or blank	$\bar{X}$	S.D.
a. INTRODUCTION TO TEACHING	16.0	6.0	8.0	18.0	10.0	42.0	3.10	1.58
b. GENERAL PSYCHOLOGY	0.0	4.0	6.0	22.0	30.0	38.0	4.31	0.93
c. HUMAN GROWTH AND DEVELOPMENT	2.0	4.0	4.0	14.0	38.0	38.0	4.37	1.10
d. EDUCATIONAL PSYCHOLOGY	2.0	6.0	14.0	24.0	22.0	32.0	3.91	1.12
e. SOCIAL FOUNDATIONS OF EDUCATION	14.0	12.0	10.0	22.0	14.0	28.0	3.14	1.44
f. HISTORY AND PHILOSOPHY OF EDUCATION	14.0	8.0	10.0	22.0	14.0	32.0	3.21	1.45
g. EVALUATION AND GUIDANCE	8.0	8.0	8.0	26.0	18.0	32.0	3.56	1.33
h. METHODS COURSES	2.0	8.0	4.0	24.0	34.0	28.0	4.11	1.12
i. MICRO TEACHING	4.0	0.0	6.0	18.0	32.0	40.0	4.44	1.19
j. STUDENT TEACHING	6.0	2.0	2.0	10.0	48.0	32.0	4.40	1.26

made the orientation of the courses more practical and less theoretical. Most of the subjects in the study completed these courses prior to these changes. Courses receiving the highest mean ratings were Micro Teaching and Student Teaching. In general the subjects perceived more value in the courses involving practical applications and less value in the theoretical courses. This was also evident in the study conducted by Brimm and Ayers(12) of a sample of 200 seniors just completing the teacher preparation program of the University.

Correlations of the data presented in Tables 10 and 11 with other variables in the study were computed. However, the results were inconclusive and the data have been ommitted from this report.

Principal Evaluation of Subjects

The principal of each subject was asked to complete two instruments designed to evaluate weakness and strengths of the individual. The first instrument consisted of 59 items related to the teacher preparation program of the subjects, and has been used for the past four years in the evaluative efforts of the Office of the Administrative Assistant for Special Services (13, 14, 15). Table 12 shows the percentage ratings and the mean and standard deviations for each item. The lowest mean ratings given by the principals were (a) knowledge and understanding of the biological sciences, (b) knowledge and understanding of the physical sciences, (c) making effective uses of community resources, (d) handling disciplinary problems, (e) insight into causes of behavior, and (f) knowledge and understanding of mathematics. It should be noted that no ratings were significantly low. Highest ratings were in the area of (a) ability to work with colleagues, (b) appropriate ethical behavior, (c) understanding the goals of the school, (d) cooperation and dependability, and (e) attitudes toward fellow teachers.

Principals were also asked to complete the Teacher Evaluation by Supervisor Form. This instrument consists of four questions in four broad areas including: (a) subject matter competence, (b) relations with students, (c) appropriateness of assignments, and (d) overall effectiveness. Table 13 shows the mean ratings for each of these items.

Intercorrelations of the results of the administration of both instruments with the other variables in the study were made. Results obtained with the later instrument are reported in this document in the Correlation Matrix (variables 16-19). High intercorrelations were noted between each of the four dimensions measured by the Teacher Evaluation by Supervisor Form. Significant positive correlations were noted between ratings of subject matter competence and Education and Psychology quality point average; the Lively and Interesting Factor and total score of the Student Evaluation of Teaching; and Items 1, 3, 7, 11, 12, 18, 19, and 20 of the Classroom Observation Record. In general subjects who posed greater

Table 12

Percentage Ratings, Means, and Standard Deviations of Selected Items Rated by Principals (N=48)

Item	No opportunity to observe 0	Very unsatisfactory 1	Somewhat unsatisfactory 2	Neither satisfactory nor unsatisfactory 3	Somewhat satisfactory 4	Very satisfactory 5	$\bar{X}$	S.D.
1. Understanding the goals of the school	2.0	0.0	0.0	0.0	19.6	78.4	4.80	0.40
2. Personal appearance	0.0	0.0	0.0	2.0	23.5	74.5	4.73	0.49
3. Enthusiasm for the teaching profession	0.0	0.0	2.0	2.0	21.5	74.5	4.69	0.62
4. Adaptability in the classroom	2.0	0.0	0.0	3.9	25.5	68.6	4.66	0.56
5. Cooperation and dependability	0.0	2.0	0.0	0.0	13.7	84.3	4.78	0.64
6. Attitudes toward children	0.0	0.0	3.9	0.0	21.6	74.5	4.67	0.68
7. Attitudes toward fellow teachers	0.0	0.0	0.0	0.0	27.5	72.5	4.73	0.45
8. Attitudes toward supervisors	0.0	2.0	0.0	0.0	21.6	76.5	4.71	0.67
9. Accuracy in maintaining official records and reports	0.0	0.0	0.0	2.0	31.4	66.7	4.65	0.52
10. Understanding and using courses of study and curriculum guides	2.0	0.0	0.0	3.9	33.3	60.8	4.58	0.58
11. Making effective use of community resources	0.0	2.0	3.9	2.0	52.9	39.2	4.24	0.84
12. Handling disciplinary problems	0.0	3.9	3.9	2.0	29.4	60.8	4.39	1.00
13. Getting acquainted with the community and its people	0.0	0.0	2.0	2.0	45.1	50.9	4.45	0.64
14. Keeping abreast of recent professional developments	2.0	0.0	0.0	2.0	41.2	54.9	4.54	0.54
15. Evaluating pupil progress	0.0	0.0	2.0	2.0	31.4	64.7	4.59	0.64
16. Motivating pupils who seem disinterested	2.0	0.0	2.0	2.0	41.2	52.9	4.48	0.65
17. Relationships with parents	0.0	0.0	0.0	3.9	31.4	64.7	4.61	0.57
18. Participation in professional activities	2.0	2.0	0.0	3.9	43.1	49.0	4.40	0.76
19. Potential for advancement in the profession	0.0	0.0	3.9	3.9	19.6	72.6	4.61	0.75

Table 12, Continued

20. Relationships with fellow teachers	0.0	0.0	2.0	0.0	21.6	76.5	4.73	0.57
21. Overall effectiveness of this person in comparison with other teachers in your school	4.0	0.0	3.9	2.0	19.6	70.6	4.63	0.73
22. Overall qualifications of this person to teach in your particular school situation	0.0	2.0	0.0	0.0	19.6	78.4	4.73	0.67
1. Teaching personality:								
a. Ability to work with children	4.0	0.0	0.0	2.0	29.4	64.7	4.65	0.52
b. Ability to work with colleagues	2.0	0.0	0.0	0.0	23.5	74.5	4.76	0.43
c. Ability to work with members of the community	9.8	2.0	0.0	2.0	29.4	56.9	4.54	0.75
d. Ability to maintain a friendly disposition	2.0	0.0	0.0	0.0	25.5	72.6	4.74	0.44
e. Ability to lead a well-rounded life, to enjoy work and play	4.0	0.0	3.9	0.0	19.6	72.6	4.67	0.69
f. Ability to work with parents	4.0	0.0	0.0	0.0	33.3	62.8	4.65	0.48
2. General knowledge and understanding of:								
a. The physical sciences	29.4	7.8	0.0	2.0	29.4	31.4	4.08	1.23
b. The biological sciences	29.4	7.8	0.0	2.0	31.4	29.4	4.06	1.22
c. American culture and institutions	21.6	3.9	0.0	2.0	31.4	41.2	4.35	0.95
d. Art, music, literature, philosophy	13.7	2.0	0.0	2.0	41.2	41.2	4.39	0.75
e. Mathematics	23.5	5.9	0.0	3.9	27.5	39.2	4.23	1.11
3. Ability to use the English language effectively	4.0	0.0	0.0	0.0	21.6	74.5	4.78	0.42
4. Knowledge and understanding of the subject taught	4.0	0.0	0.0	0.0	21.6	74.5	4.78	0.42
5. Understanding of children and youth:								
a. Insight into causes of behavior	4.0	0.0	3.9	2.0	41.2	49.0	4.41	0.73
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	11.8	2.0	0.0	7.8	29.4	49.0	4.40	0.84
c. Skill in group work	7.9	0.0	0.0	0.0	31.4	60.8	4.66	0.48
d. Skill in maintaining discipline	2.0	2.0	2.0	5.9	23.5	64.7	4.50	0.86
e. Skill in guidance of children	2.0	2.0	2.0	2.0	37.3	52.9	4.43	0.82
6. Understanding of the nature of the learning process								
a. Skill in helping students determine objectives	11.8	0.0	0.0	5.9	33.3	49.0	4.49	0.63
b. Skill in motivating students	7.8	0.0	2.0	2.0	39.2	49.0	4.47	0.65

Table 12, Continued

c. Skill in pupil-teacher planning	11.8	0.0	2.0	2.0	31.4	52.9	4.53	0.66
d. Skill in using a variety of teaching methods	11.8	0.0	0.0	2.0	31.4	54.9	4.60	0.54
e. Skill in evaluating pupil growth and class procedures with pupils	4.9	0.0	0.0	7.8	25.5	60.8	4.56	0.65
f. Ability to construct appropriate tests and learning materials	15.7	0.0	0.0	0.0	31.4	52.9	4.63	0.49
g. Skill in the application of learning theory in the classroom	11.8	2.0	0.0	0.0	39.2	47.1	4.47	0.73
h. Skill in providing differentiated learning experiences for various groups and individuals	15.7	0.0	0.0	2.0	35.3	47.1	4.54	0.55
7. Knowledge of sources of teaching materials:								
a. Printed materials	2.0	0.0	0.0	0.0	35.3	62.8	4.64	0.49
b. Audio-visual materials	4.0	0.0	0.0	2.0	35.3	58.8	4.59	0.54
c. Community resources	7.9	2.0	0.0	3.9	33.3	52.9	4.47	0.78
d. Library and library materials	4.0	2.0	0.0	0.0	35.3	58.8	4.55	0.71
8. Ability to use teaching materials effectively	7.8	0.0	0.0	0.0	29.4	62.8	4.63	0.47
9. Knowledge and understanding of:								
a. The purposes of the school in relation to the overall purpose of society	4.0	0.0	3.9	2.0	27.5	62.7	4.55	0.74
b. The social structure of the community and its meaning for education	5.9	2.0	3.9	0.0	43.1	45.1	4.33	0.86
c. The institutions of the community	4.0	2.0	2.0	3.9	37.3	47.1	4.36	0.85
d. The different value-patterns of social-economic classes	5.9	2.0	0.0	3.9	25.3	52.9	4.46	0.77
e. The economic life of the community	7.8	2.0	2.0	2.0	33.3	52.9	4.45	0.83
f. Appropriate ethical behavior of the teacher	4.0	0.0	2.0	0.0	15.7	78.4	4.78	0.55

Table 13

Ratings of Principals of Four Dimensions of Teaching[1] (N=48)

Dimension	Mean	S.D.
Subject Matter Competence	4.12	0.72
Relations With Students	4.16	0.84
Appropriateness of Assignments	4.23	0.72
Overall Effectiveness	4.14	0.71

[1]Ratings are on a 1-5 scale with 5 being the highest score.

competency in subject matter, as determined by principals, were more lively and interesting in the classroom according to student ratings. Also the students of the subjects tended to be more alert and confident and the subjects themselves were more responsive, original, alert, confident, systematic, adaptable and optimistic than subjects who received lower ratings in subject matter competency by principals.

Correlations of the ratings of subjects relations with students were positive with Education and Psychology quality point average and the Lively and Interesting Factor and total score of the Student Evaluation of Teaching. These results were similar to those obtained with the first rating by principals of subject matter competency. Significantly positive correlations were noted between all Items of the Classroom Observation Record except 6, 13, 14, 15, 17, 18. This might indicate that the observations made by the observers as a part of this study and those of the principals are valid. It further indicates that the subjects of the study have many of the characteristics of good teachers as reported in the literature.

An examination of the results of the correlation of the principal's ratings of appropriateness of assignments with the various variables showed only four significant correlations of interest. Negative correlations of this variable were noted with Factor V (Non-Directive) and the composite score of the Student Evaluation of Teaching. Positive correlations were noted with Items 14 and 20 of the Classroom Observation Record, indicating a significant relations between the factor and responsibility and adaptable. In both

cases the correlations indicated that the subjects were adaptable and responsible in their work.

Significant correlations were found between the principal's ratings of overall effectiveness and Factor I (Friendly and Cheerful), Factor III (Lively and Interesting) and composite score of the Student Evaluation of Teaching. Thus it appeared that the principal's and student's ratings of the subjects were similar. Positive correlations were noted between all Items of the Classroom Observation Record except 6 and 17. Again, it can be concluded that the principals and trained observers viewed the subjects in the same manner. Also it would appear that the subjects have many of the characteristics of good teachers as reported in the literature.

Personality Scale

The California F-Scale Forms 45 and 40 was used to assess one aspect of the personality of the subjects. The F-Scale range of possible values is 28 to 196, with 112 the mid-point. The lower the value, the more non-authoritarian the indication. A total of 43 subjects completed the F-Scale with a mean score of 98.6 and standard deviation of 22.8. This would indicate that the subjects in the study tended toward being non-authoritarian. Scores ranged from 48 to 177.

Table 14 shows a summary of the mean and standard deviations of scores on the F-Scale by year of graduation of the subjects. Applying the analysis of variance technique, there were no significant differences in scores made by the three groups (see Table 15). Table 16 shows the means and standard deviations of the F-Scale score for each of the five major teaching groups. Applying the analysis of variance technique (see Table 17), there were no significant differences between the major levels of teaching. These results are comparable to those reported in other studies(16).

Table 14

Means, Standard Deviations and Number of Subjects Completing the California F-Scale By Year of Graduation (Bachelor's Level)

Year	Mean	S.D.	N
1970 and 1971	91.0	18.5	11
1972	101.7	20.0	15
1973	105.3	23.2	13

Table 15

Summary of Analysis of Variance of California F-Scale Scores Classified on Basis of Year of Graduation

Source of Variation	df	Sum of Squares	Mean Square	F
Among the Means	2	1,298.3	649.2	0.975
Within the Means	36	23,974.1	666.0	

Table 16

Means, Standard Deviations and Number of Subjects Completing the California F-Scale by Teaching Level

Grade Level	Mean	S.D.	N
Kindergarten	97.3	27.0	8
Grades 1-3	110.1	40.0	11
Grades 4-6	103.5	15.9	6
Grades 7-9	92.0	20.8	5
Grades 10-12	91.5	18.0	8

Table 17

Summary of Analysis of Variance of California F-Scale Scores When Classified on Basis of Grade Taught by Subject

Source of Variation	df	Sum of Squares	Mean Square	F
Among the Means	4	2,152.0	538.0	0.770
Within the Means	34	23,071.9	699.1	

An examination of the correlational pattern of scores from the F-Scale revealed significant relationships with Major Field quality point average and Items 3, 6, 10, 12, 14, 17, and 18 of the Classroom Observation Record. All correlations with the Classroom Observation Record were low and negative and are similar to the results found by other scores (17). The results would indicate that the students of the subjects were responsible and that the subjects themselves were democratic, alert, responsible, confident and systematic. All of these characteristics have been associated with good teaching.

Student Evaluation of Teaching

The Student Evaluation of Teaching was administered to all children above the second grade. Data was collected from the students of 25 subjects in the study. Table 18 shows the mean and standard deviation of the scores for each of the five factors and the composite score from the instrument. Table 19 shows only the composite score for the Student Evaluation of Teaching by year of graduation of the subject from the University and also by grade level taught. The maximum possible score for any one factor or the composite score is 400. Highest ratings were received on the Factors Knowledgeable and Poised and Friendly and Cheerful. The lowest mean ratings were on the factors related to democratic procedures. There were no significant differences between year of graduation or grade level taught on the composite mean scores.

Table 18

Student Evaluation of Teaching (N=25)

Variable	Mean	S.D.
Friendly and Cheerful	344.28	45.63
Knowledgeable and Poised	356.68	40.04
Lively and Interesting	308.88	64.99
Firm Control (Discipline)	303.56	34.26
Non-Directive (Democratic Procedure)	257.36	42.21
Composite Score	315.64	29.34

Table 19

Means, Standard Deviations, Number of Subjects and t-test Between Means for Composite Score of the Student Evaluation of Teaching by Year of Graduation and Grade Level Taught

Variable	Mean	S.D.	N	t
Year of Graduation				
1970 and 1971	318.4	15.56	10	0.53
1972 and 1973	313.3	34.83	15	
Grade Level Taught				
Grades 3-6	312.8	23.30	10	0.62
Grades 7-12	318.8	32.80	15	

The intercorrelational pattern (see Correlation Matrix, Variables 21-26) of the five factors and the composite score from the Student Evaluation of Teaching are similar to those reported by Veldman(18). Significant positive correlations were noted between Factor I (Friendly and Cheerful) and Education and Psychology quality point average, Factors I and IV of the Principal's Evaluation, and Items 1, 2, 3, 5, 6, 7, 8, 12, 19 and 22 of the Classroom Observation Record. Again, this would tend to indicate that principals and students tend to view the subjects in the same manner. Significant correlations were found between Factor II (Knowledgeable and Poised) and the Professional Education Test of the NTE and Items 8 and 9 of the Classroom Observation Record. Factor III (Lively and Interesting) correlated significantly with factors I, II, and IV of the Principal's Evaluation and with Items 1, 2, 3, 5, 6, 8, 12, 13, 19, 20, and 22 of the Classroom Observation Record. This again indicates that students, principals, and observers view the subjects in the same manner.

Factor IV (Firm Control) correlated negatively with several scores from the NTE and positively with grade level taught. This would indicate that there was no pattern relative to the amount of control exercised in the classroom as viewed by the principals or observers. However, it appeared that the younger students viewed the subjects as exercising more control or discipline than did older subjects (students in the upper grades). Significant correlations were noted between Factor V (Non-Directive) and Education and Psychology quality point average and Items 1, 2, and 22 of the Classroom Observation Record. Significant correlations were noted

between composite scores of the Student Evaluation of Teaching and all four factors from the Principal's Evaluation and Items 1, 2, 3, 5, 6, 7, 8, 9, 12, 19, 20, and 22 of the Classroom Observation Record. This would indicate very strongly that principals, observers, and students view the subjects in the same manner.

Interaction Analysis

A ten category interaction analysis system was utilized to record observed classroom behavior of the subjects. The system proposed by Amidon and Flanders(19) was implemented with the aid of three specially trained graduate assistants. Two sets of observations were made during the year. The first series of observations were made in January and February of 1974 and the second set were made approximately nine weeks later in late March, April, or early May. Five ratios of teaching were computed using the data from all subjects. A t-test was used to determine if significant differences existed between the first and second set of observations for the subjects.

Table 20 shows a summary of the means and standard deviations of the various ratios for the two sets of observations. Also shown is the "t" computed between the two sets of observations. There were no significant differences between the two sets of observations. There were no significant differences between the ratios of the two sets of observations.

The I/D ratios in Table 20 are above the .40 average for teachers according to the work of Campbell and Barnes(20). More indirect teaching has been associated in some studies with higher student achievement and positive attitude formation. Superior teachers have been reported by Amidon and Hough(21) to become more direct as the school year progresses. The results indicated that subjects in the present study were more direct in the second set of observations. The i/d ratios of 1.57 and 1.72 are also higher than the ratios of less than 1.00 reported for the average teacher. The subjects in this study used more acceptance of feeling, praising, or encouraging and acceptance of use of ideas of student responses than average teachers.

Other ratios reported in Table 20 are similar to the ratios of teachers reported in other studies. The ST/TT ratio indicated that the subjects were talking approximately two-thirds of the time. The Sil/Tot ratio indicated that somebody was talking approximately two-thirds of the time and the Lec/Tot ratio indicated that in the first observation, lecturing occured approximately one-third of the total teaching time. The second observation indicated that there was an increase in the amount of time spent in lecturing.

Table 21 shows a summary of the average percentage of time spent by the subjects at various grade levels acting in each of the ten interaction categories. In general the amount of direct

Table 20

Means, Standard Deviations and t-test for Interaction Analysis

Ratio	First Series of Observations (N=45)		Second Series of Observations (N=28)		t-test
	Mean	S.D.	Mean	S.D.	
Indirect to Direct Teaching (I/D) (1, 2, 3, 4/5, 6, 7)	0.79	0.75	0.57	0.59	1.301
Indirect to Direct Teaching (i/d) (1, 2, 3/6, 7)	1.57	1.97	1.72	2.66	0.271
Student Talk to Teacher Talk (ST/TT) (8, 9/1, 2, 3, 4, 5, 6, 7)	0.59	0.57	0.55	0.66	0.272
Silence to Total Teaching (Sil/Tot) (10/1, 2, 3, 4, 5, 6, 7)	0.45	0.93	0.40	0.29	0.272
Lecture to Total Teaching (Lec/Tot) (5/1, 2, 3, 4, 5, 6, 7)	0.48	0.20	0.63	0.47	1.852

Table 21

Average Percentage of Time Spent by Subjects (at Various Grade Levels) Acting in Each of the Ten Interaction Categories*

Grade Level	1	2	3	4	5	6	7	8	9	10
Kindergarten										
1st Observation (N=9)	0.2	6.2	0.7	16.5	26.8	9.3	1.3	9.2	10.3	20.0
2nd Observation (N=6)	0.4	2.5	1.5	14.5	29.3	11.4	1.5	8.6	15.9	14.4
Grades 1-3										
1st Observation (N=11)	0.0	7.8	0.9	18.9	19.6	7.4	2.2	20.3	7.1	15.5
2nd Observation (N=7)	0.1	7.2	0.5	16.9	26.1	7.9	1.5	13.1	7.9	18.9
Grades 4-6										
1st Observation (N=9)	0.0	5.3	2.1	19.9	24.0	4.3	1.3	15.2	13.6	14.8
2nd Observation (N=5)	0.0	2.4	1.1	12.3	30.9	8.7	2.3	15.1	8.9	18.3
Grades 7-9										
1st Observation (N=6)	0.0	4.2	0.5	13.7	41.1	3.6	1.9	12.2	11.4	11.3
2nd Observation (N=4)	0.0	2.9	1.1	11.8	35.3	10.1	1.8	10.7	12.9	13.4
Grades 10-12										
1st Observation (N=9)	0.0	2.7	0.7	10.5	33.9	4.2	0.4	14.1	15.5	18.1
2nd Observation (N=4	0.1	2.1	0.2	8.3	35.8	1.3	0.5	20.8	14.8	16.3
Total for all Grades										
1st Observation (N=44)	0.0	5.4	1.0	16.2	27.8	6.0	1.4	14.6	11.4	16.2
2nd Observation (N27)	0.1	3.7	0.8	13.4	30.6	8.1	1.5	13.3	11.7	15.5

*Categories 1-4, Indirect Influence of Teacher; 1=Accepts Feeling, 2=Praises or Encourages, 3=Accepts or Uses Ideas of Students, 4=Asks Questions. Categories 5-7, Direct Influence of Teacher; 5=Lecturing, 6=Giving Directions, 7=Criticizing of Justifying Authority. Categories 8-9, Student Talk; 8=Student Talk-Response, 9=Student Talk-Initiation. Category 10=Silence or Confusion.

teacher influence increases from the lower grades through the upper grades of the secondary school. The amount of time spent in lecture almost doubled from the lower grades through the upper levels of the high school.

Significant positive correlations of the I/D ratio were noted with all Items of the Classroom Observation Record except 4, 9, 16, and 18. The revised indirect to direct teaching ratio (i/d) correlated significantly with all Items on the Classroom Observation Record except 2, 7, 9, 12, 14, 15, and 20. The ST/TT and the Sil/Tot ratios did not correlate significantly with any other variables in the study. However, the Lec/Tot ratio correlated significately (negatively) with Items 1, 2, 5, 11, 12, 13, 14, and 20 of the Classroom Observation Record.

Classroom Observation Record

The Classroom Observation Record was completed on each subject by the observers at the conclusion of the first observation period. The first four items of the instrument assess four dimensions of pupil behavior, and the last 18 items assess dimensions of teacher behavior. Table 22 contains a summary of the means and standard deviations for each of the 22 items of the instrument. The lowest mean score was item 6 (Autocratic-Democratic) indicating that the subjects tended toward being slightly autocratic. However, the scores from this item were significantly correlated (-.392) with the California F-Scale. The highest mean score (6.29) was found for Item 14 (Evading-Responsible) indicating that the subjects were very responsible in their actions in the classroom.

An examination of the correlations of the variables (see Correlation Matrix, Items 32-53) indicated high intercorrelations. The correlations of these items has been discussed in conjunction with the various measures mentioned above. Therefore, no further discussion will be made of the results obtained with this instrument.

Subjective Criticisms of Teacher Preparation Program

As a part of the total study the observers interviewed all subjects and their principals. The specific purpose of these interviews was to illicit any additional information that might be of value in examining the total programs of teacher preparation at the University. The information that was received was largely in the form of criticisms of the undergraduate program. Many comments were made; however, it was felt that the following criticisms should be included in this report since they were mentioned by a number of individuals.

1. The program of teacher preparation at the University involves too much theory and not enough practical experiences (particular concern was expressed for the courses in the history and philosophy of education and social foundations of education). It

Table 22

Means and Standard Deviations for Each Dimension of the Classroom Observation Record (N=48)

Dimension	Mean	S.D.
Pupil Behavior		
1. Apathetic-Alert	6.00	0.87
2. Obstructive-Responsive	5.83	0.88
3. Uncertain-Confident	5.63	1.02
4. Depending-Initiating	5.25	1.19
Teacher Behavior		
5. Partial-Fair	6.13	0.79
6. Autocratic-Democratic	5.75	0.98
7. Aloof-Responsive	6.15	0.90
8. Restricted-Understanding	6.17	0.83
9. Harsh-Kindly	6.23	0.66
10. Dull-Stimulating	5.77	1.05
11. Stereotyped-Original	5.45	1.08
12. Apathetic-Alert	6.13	0.76
13. Unimpressive-Attractive	6.27	0.71
14. Evading-Responsible	6.29	0.80
15. Erratic-Steady	5.92	0.99
16. Excitable-Poised	6.13	0.94
17. Uncertain-Confident	5.85	1.05
18. Disorganized-Systematic	6.10	1.02
19. Inflexible-Adaptable	5.79	1.13
20. Pessimistic-Optimistic	5.81	1.07

Table 22, Continued

21. Immature -Integrated	6.06	0.89
22. Narrow-Broad	5.90	0.83

should be pointed out; however, that since the majority of the subjects had completed their work at the University these courses have been revised to a large degree introducing more practical experiences.

2. A concern was expressed for additional work in the course of study in the areas of classroom control and working with children with learning disabilities. Again, it should be noted that within the past year additional course work has been added in these areas.

3. The subjects and principals felt that the College of Education should be more selective in admitting students to the teacher preparation programs. In general, it was felt that if this occured the overall teaching profession would be benefited by better individuals trained for the schools.

4. Subjects teaching at the kindergarten level voiced a concern that there was insufficient work in the practical aspects of maintaining the classroom and in conducting an educational program at this level. It should be pointed out; however, that the kindergarten methods courses have been extensively revised in the past year. Therefore, some of the concerns of the kindergarten teachers have been alleviated.

5. A number of elementary subjects expressed a desire for additional work in the preparation program in the areas of the teaching of reading and mathematics.

6. The subjects expressed a concern that the teacher preparation program emphasized too much teaching in the "ideal classroom" and did not put sufficient emphasis on the real classroom, i.e., an unequipped classroom in a 25 year old building containing more than one grade level.

Summary

In summary this chapter has presented an overview of the results of the first year of the application of the Tennessee Technological University Evaluation Model. The instrumentation appeared to be valid and reliable for use with graduates of the teacher preparation programs of the University. The career baseline data gathered on the subjects in this study was comparable to that from other

studies. The ratings of the teacher preparation program again are comparable with those obtained during the last several years. In general, principals rated the subjects quite highly in such areas as ability to work with colleagues, cooperation and dependability, and understanding the goals of the schools. Criticisms of the subjects by the principals included a need for a greater knowledge and understanding of the sciences and mathematics, handling disciplinary problems, and insight into causes of behavior. Students perceived the subjects in a manner similar to that of the principals. Based on measures obtained with the California F-Scale the subjects were to some degree non-authoritarian in their teaching. Employing interaction analysis and a classroom obervation scale revealed that the subjects were using more indirect than direct teaching methods and were exhibiting many of the characteristics of good teachers as reported in the literature. The major subjective criticism of the teacher preparation program, obtained as a part of this study, included more practical experiences at the undergraduate level.

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20. Amidon, Edmund J. and Hough, J. B. Interaction Analysis: Theory, Research and Application, Reading, Mass: Addison Wesley Publishing Company, 1967.

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CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The objectives of this chapter are threefold: (1) to summarize briefly the total evaluative study that was conducted during the 1973-74 school year; (2) to draw conclusions based on the findings of the study; and (3) to make recommendations relative to the findings.

Summary

The purpose of this study was to investigate the feasibility of modifying a model to evaluate the graduates of the teacher preparation program of Tennessee Technological University. More specific objectives include the following: (1) to provide information for faculty and administrators concerned with the teacher preparation programs at Tennessee Technological University in making decisions pertinent to curriculum evaluation and development; (2) to aid in the process of making long range plans for improving the total educational program of the University with particular emphasis on the teacher preparation programs; and (3) to test the feasibility of implementing a modified version of Sandefur's Model for the evaluation of teacher education graduates.

After extensive preplanning a sample of 59 graduates of the teacher preparation program was selected for intensive study. These individuals had completed either the B. S. or M. A. degree between 1970 and 1973. Detailed data were collected on each subject by use of standardized instruments administered by specially trained graduate assistants or from university permanent records. Basic instrumentation for this study included the following: (1) University permanent records and transcript information; (2) principal's evaluation of each subject by the use of two different instruments; (3) administration of the California F-Scale to measure individual prejudices and anti-democratic tendencies; (4) administration of the Student Evaluation of Teaching to the students of the subjects; (5) administration of the Classroom Observation Record; and (6) a ten category interaction analysis system to record observed classroom behavior. All data obtained in this study were classified, coded, and keypunched for analysis. Descriptive statistics and intercorrelations were computed.

The major findings of the study indicated that the subjects who had completed the bachelor's degree had completed approximately 2.2 years of classroom teaching. Almost half of the individuals were teaching below grade four. The overall quality point average for the individuals was 2.92, 2.90 in the major teaching field courses, and 3.00 in education and psychology courses. Mean scores achieved by 45 of the subjects on the National Teacher Examinations indicated that the individuals were achieving at approximately the 45th percentile.

As would be expected, correlations between achievement and scores from the National Teacher Examinations were high. The results obtained in this phase of the study were similar to those reported in other studies of the graduates of the teacher preparation program. Data reported relative to the ratings of the value of certain education courses and of overall aspects of the teacher preparation program were similar to those reported in other studies.

Principal's evaluations of the subjects were consistently high; however, it was noted that principals perceived some problems of the subjects with their knowledge and understanding of the sciences and mathematics, effective use of community resources, disciplinary problems, and insight into causes of behavior. Highest ratings were in the areas of ability to work with colleagues, ethical behavior, understanding the goals of the school and cooperation and dependability. Analysis of the results of the administration of the California F-Scale revealed that the mean score of the subjects was 98.6 indicating that the group as a whole tended toward being non-authoritarian. Scores ranged from 48 to 177. As a group, the students of the subjects rated the individuals as being very knowledgeable and poised in their teaching. However, they saw the individuals, to some degree, as being more directive than non-directive in their teaching. Results of the administration of the ten category interaction analysis system revealed that the subjects were tending to use more indirect than direct methods in their teaching. The ratios of student talk to total teaching, silence to total teaching, and lecturing to total teaching were similar to those reported in the literature. The results of the administration of the Classroom Observation Record indicated that the subjects as a whole were employing good teaching techniques when compared to other studies reported in the literature. Significant correlations were found between many of the 55 variables employed in the study.

Conclusions

Following are the major conclusions based on the findings of the study. It should be noted that additional analyses of the data can be performed that may make additional conclusions warranted. This section is divided into two sub-parts corresponding to the two major parts of the study, i.e., the feasibility of the use of the model for evaluation and conclusions based on the application of the model to the evaluation of the graduates of the teacher preparation program of the university.

Feasibility of Application of Model

1. The plan of evaluation outlined in this report can be used to gather data that will be useful in modifying and improving the programs of teacher preparation of Tennessee Technological University.

2. The estimated costs associated with the project closely approximate those reported as a part of the original model for teacher evaluation developed by Sandefur. It is estimated that the total

costs were as follows: Three half-time graduate assistants for nine months, one half-time professional individual for one year, a half-time secretary for one year, $750 for travel and $500 for supplies, expenses, and communications. In addition, it is estimated that at least two hours of computer time and supporting assistance were used in statistical analyses.

3. The instruments employed in the study appear to be valid and can provide essential information with regard to the graduates of the teacher preparation programs.

4. Modifications can be made in the original model developed by Sandefur that can lead to more valid and useful information for an institution replicating the plan of evaluation.

Evaluation of Graduates

1. The pupils of more experienced teachers appeared to be more alert, initiating, and resourceful in their classroom activities.

2. Subjects with greater experience in the classroom appeared to be more fair, democratic, alert, and have a broader base of behavior than the less experienced teachers.

3. Students of subjects in the upper grades felt that the teachers did not exercise enough control in the classroom.

4. As perceived by students, the teachers in the upper grades were more directive in their instructional activities than teachers in the lower grades.

5. Subjects at higher grade levels are using significantly more lecture in the classroom than teachers in the lower grades.

6. Approximately 85% of the subjects were teaching in a field for which they held certification according to the records of the Tennessee State Department of Education.

7. The mean quality point averages in education and psychology subjects, major teaching field subjects, and the overall quality point average for subjects completing the B. S. degree ranged from 2.90 to 3.00. These mean averages were slightly above the overall averages for the graduates of the College of Education.

8. Subjects with higher quality point averages in education and psychology courses had better relations with students and were in general more friendly and cheerful, knowledgeable and poised, and non-directive in their teaching.

9. Subjects who achieved higher quality point averages in their major teaching field tended to be more authoritarian oriented than subjects who achieved at a lower level. This is probably due to the fact that the large majority of the subjects were teaching in the upper grades where less democratic and more

authoritarian teaching methods are used or the subjects were attempting to complete a specified unit or curriculum.

10. Subjects with overall higher quality point averages and years of experience appeared to use more indirect methods than students with lower quality point averages.

11. A profile of the subject's scores from the administration of the Kuder Preference Record appears similar to that of other groups of subjects who are graduates of the teacher preparation program of Tennessee Technological University.

12. Overall scores achieved by the subjects on the National Teacher Examinations placed the individuals at approximately the 45th percentile which is comparable with other groups that have been studied.

13. Subjects who tended to achieve higher on the Professional Education Test of the NTE tended to be more knowledgeable and poised than other subjects.

14. Subjects with higher scores in their major teaching field tended to lecture more and become more partial to certain students in their classrooms.

15. Ratings of various aspects of the teacher preparation program of the University by the subjects were similar to that of other groups of individuals.

16. In general, principal's ratings of the subjects were high. However, it should be pointed out that principals rated the subjects somewhat lower in their knowledge and understanding of the sciences and mathematics, lacking effective use of community resources, handling disciplinary problems, and insight into characteristics of behavior. Highest ratings of the subjects were noted in the areas of ability to work with and attitudes toward colleagues, ethical behavior, understanding the goals of the school, and cooperation and dependability.

17. There was a positive correlation between the principal's ratings and various items on the Classroom Observation Record and the Student Evaluation of Teaching. Based on the principal's observation (it appeared that) the subjects in this study possessed many of the characteristics of good teachers as reported in the literature.

18. The subjects of this study appeared to be more non-authoritarian than authoritarian as measured by the California F-Scale. There were no significant differences in scores achieved by the subjects when examined on the basis of grade level or years of experience in the classroom. These findings are to some degree contrary to findings of other studies reported in the literature.

19. The ratings of the subjects by the students correlated highly with ratings made by the principals and the trained observers who completed the Classroom Observation Record.

20. Based on student observations, the subjects were highly knowledgeable and poised; and on the negative side the students perceived the subjects as being more directive than non-directive as measured by the Student Evaluation of Teaching.

21. The subjects in the study appeared to be using more indirect than direct teaching methods in their classrooms. Indirect-direct ratios based on the interaction analysis system used were higher than for comparable groups.

22. Other ratios computed from the interaction analysis observations were comparable to those reported in the literature.

23. Many of the characteristics reported in the literature of good teachers were noted as a result of the administration of the Classroom Observation Record.

24. Based on subjective criticisms voiced by the subjects and their principals, there is a need in the programs of the University to include more practical experiences at an earlier level, more emphasis on the areas of classroom control and discipline and less theory in the courses. Also greater emphasis in the teacher preparation program should be put on more practical aspects of the classroom such as completion of standard records, teaching of reading and mathematics, teaching more than one grade level at a time, and working in a poorly equipped school.

In general, the subjects of this study seemed to possess many of the characteristics of good teachers as reported in the literature. As might be expected, it was difficult to identify specific problems. Principals praised the teachers as did their students. However, it must be kept in mind that the subjects who participated in this study were volunteers. Therefore, some bias has been introduced into the total study that may make some of the conclusions invalid when applied to the total population of graduates.

Recommendations

Based on the conclusions of this study it is felt that the following recommendations are warranted. These recommendations center largely around the continuation and modification of the study outlined in this report.

1. The plan outlined in this report should be replicated using subjects that graduated from the University from 1972 through 1973 and adding subjects who completed their degrees in 1974.

2. Continuing contact should be maintained with other institutions pursuing similar projects, and the literature related to teacher evaluation should be continuously monitored.

3. Considerations should be given to the use of other instruments to gather data as these become available.

4. Based on subjective evidence, it appears that the most valid times for observation in the classrooms would be from mid-October through mid-November and from about mid-January through the end of April.

5. Consideration should be given to examining the personality of the supervising principal. There is some evidence to indicate that ratings of teachers and their performances may be related to the personality of the supervisor.

6. Further analysis of the data appears warranted. However, it is recommended that these data analyses be done based on individual needs of the faculty and administration of the University.

7. A more extensive data bank of information on all graduates of the teacher preparation program should be established. In the course of this investigation it was found that some data on some graduates could not be located (i.e., complete data from such measures as the Kuder Preference Record, Survey of Study Habits, and the Mooney Problem Checklist).

8. Consideration should be given to the development of a complete set of computer programs for the storage, retrieval, and analysis of the data for this project. It should be pointed out that some developmental work was conducted by the D. W. Mattson Computer Center during the current year.

CHAPTER V

PLANS FOR THE CONTINUATION OF THE STUDY

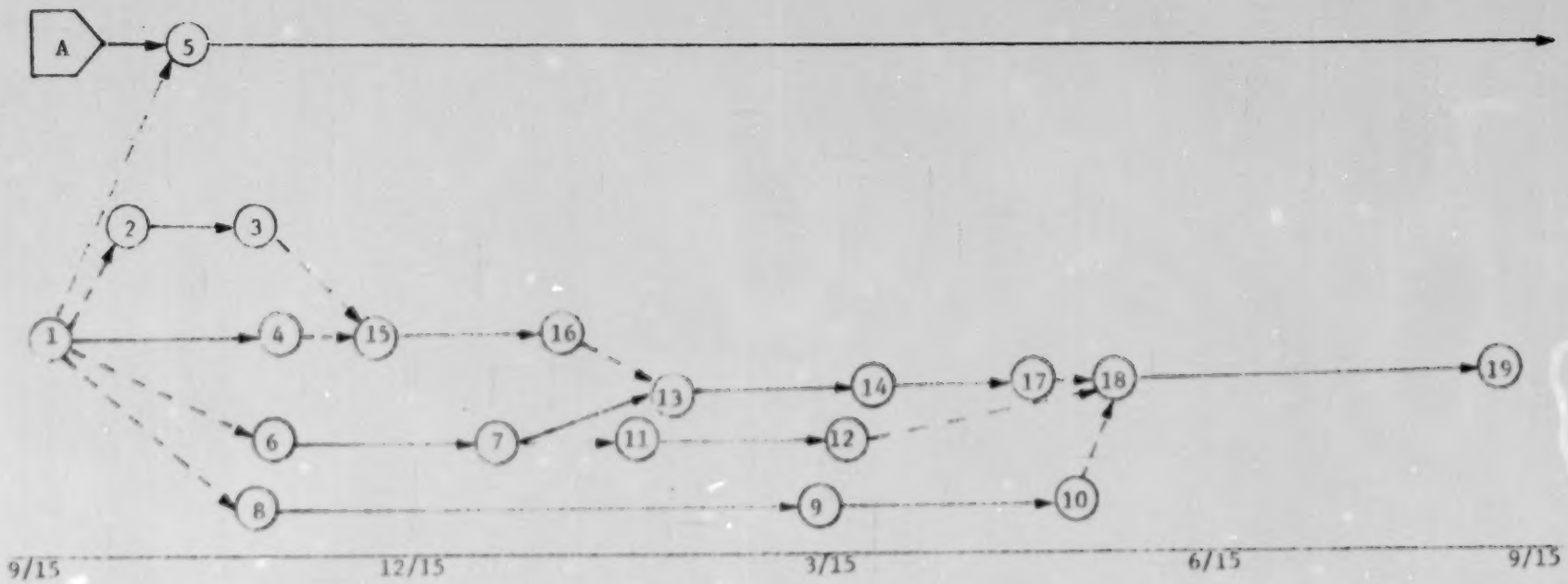
This chapter describes the tentative plans for continuation of the intensive evaluation activities of the graduates of the teacher preparation programs of Tennessee Technological University. Major emphasis in this chapter will be placed upon the plans that have been tentatively formulated for the 1974-75 studies. The assumption has been made that the level of funding of the project will remain at a relatively constant level and includes the allocation of three one half time graduate assistants, approximately one half time of a professional staff member, $750 for travel, and $500 for supplies, expenses, and communications.

Plans for 1974-75

During 1974-75 particular emphasis will be placed on evaluative studies of the 1973 and 1974 graduates of the teacher preparation programs. However, some emphasis will be given to continuing the examination of 1971 and 1972 graduates that participated in the first year of the study. A total of 43 1971, 1972, and 1973 graduates have indicated an interest in continuing in the study that was begun in 1973-74 (1971 graduates = 10, 1972 graduates = 15, 1973 graduates = 18).

Figure 3 shows an abbreviated chart for the major activities of the project during 1974-75. Initially, the three graduate students will engage in intensive studies of the use of the Classroom Observation Record, the Student Evaluation of Teaching, and Interaction Analysis. This will occur from approximately September 1 through October 15. Concurrent with these activities, a schedule of visitations will be developed for the 1971-73 graduates that have previously participated in the study. These 43 individuals will be visited on two occasions during the year. The first visit will occur during the Fall of 1974, and the second visit will occur during the Spring of 1975 with no visits scheduled after April 30.

As soon as possible after the beginning of the fall quarter a survey questionnaire will be sent to all 1974 graduates of the teacher preparation program (see Appendix B and Appendix C). At this same time the 1974 graduates will be asked to participate in the study. It is anticipated that a sample of at least 25-30 1974 graduates will be selected. During the later part of the Fall a schedule of visitation for these individuals will be prepared. During the Winter one visit will be made to each of these individuals for purposes of observation and gathering baseline data. Also



Summary of Activities

1-4 Finalize Plans for Visiting Subjects in 1973-74 Study
2-3 Training of Observers
5-- Continuing Review of Literature and Contacts With Other Projects
6-7 Survey All 1974 Graduates
8-9 Conduct Intensive Followup of Graduates of Administration and Supervision Program
9-10 Prepare Report of Administration and Supervision Study
11-12 Survey Principals of All 1974 Graduates
7-13 Select Sample of 1974 Graduates for Intensive Study as Part of Followup
13-14 Make School Visits on 1974 Graduates
15-16 First Visit to 1973-74 Subjects
14-17 Second Visit to 1973-74 Subjects
18-19 Complete Reports and Make Plans for 1975-76 Followup Studies

Figure 3. PERT Chart of Major Activities for 1974-75.

during the winter the Principals Evaluation Instrument (see Appendix D) will be sent to the principals of all individuals who are teaching in the schools.

Beginning in the late spring and continuing through the summer of 1975 data analysis will be made, and a report of the second year of the study will be prepared. It is anticipated that this report will contain comparisons of the first and second year of the study and also detailed descriptions of the 1974-75 studies.

A detailed report will also be prepared summarizing the questionnaire data (Appendix B, C, and D). The report will be similar to those that have been prepared for the graduates of the teacher preparation program for the past ten years.

It is anticipated that during 1974-75 an intensive examination will be made of all graduates of the administration and supervision programs of the University for the past five years that are currently employed as superintendents, principals, or supervisors in the State of Tennessee. These individuals have been identified and will be studied on an intensive basis to determine if they have met the objectives of the respective programs of the University.

Long Range Plans

Tentative long range plans have been made for the total project. The assumption has been made that the level of funding for personnel will remain approximately the same. It is anticipated that in 1975-76 a group of 1975 graduates of the teacher preparation program will be added to the study and those individuals who graduated in 1971 and 1972 will be dropped. The basic plan outlined for 1974-75 will be continued during 1975-76.

During the interval from 1976-77 through 1978-79 spot checks will be made of the sample that was studied intensively in the third year (1975-76) of the study. Beginning in the year 1980-81 and continuing through 1982-83 another large scale sample of subjects will be investigated. Throughout the course of each year's investigation, reports will be prepared which in turn will be used in improving the programs of teacher preparation and in completing the cycle of conceptualization of the teacher's role, the training program, and evaluation.

APPENDICES

Appendix A — Reports and Studies Related to the Teacher Preparation Programs of Tennessee Technological University

Appendix B — Questionnaire - A Follow-up Study of Teacher Education Graduates of Tennessee Technological University - Bachelors Degree

Appendix C — Questionnaire - A Follow-up Study of Master of Arts Graduates of Tennessee Technological University

Appendix D — Principal's Questionnaire - A Follow-up Study of Teacher Education Graduates of Tennessee Technological University

Appendix E — Teacher Evaluation by Supervisor Form

Appendix F — California F-Scale: Forms 45 and 40

Appendix G — Student Evaluation of Teaching

Appendix H — Classroom Observation Record

APPENDIX A

Reports and Studies Related to the Teacher Preparation Programs of Tennessee Technological University

1. Ayers, Jerry B. Report I-Restudy. A Survey of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 Through 1969, Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 49 pp.

2. Faculty of the College of Education. Report II-Restudy. Objectives of the Teacher Preparation Program, Volume I, Volume II, and Volume III. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 910 pp.

3. Ayers, Jerry B. Report III-Restudy. A Report of Four Surveys of the Graduates of the Teacher Preparation Programs of Tennessee Technological University for the Period 1965 Through 1970. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 39 pp.

4. Ayers, Jerry B. "Predicting Quality Point Averages in Master's Degree Programs in Education," Educational and Psychological Measurement. 31:491-95, 1971.

5. Ayers, Jerry B. A Survey of Student Teachers At Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1971. (mimeo.), 7 pp.

6. Ayers, Jerry B. Report V-Restudy. A Report of Two Surveys of the 1971 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1972. (mimeo.), 28 pp.

7. Ayers, Jerry B. and Michael E. Rohr. "Prediction of Quality Point Averages from Personality Variables," Educational and Psychological Measurement, 32:491-94, 1972.

8. Dotson, James R. and Jerry B. Ayers. "A Systematic Plan for the Restudy of a Teacher Education Program," The Tennessee Tech Journal, 7:85-89, 1972.

9. Ayers, Jerry B. and Michael E. Rohr. "The Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance for Education, Engineering, and Business Majors," Presented before the American Educational Research Association, April, 1972, Chicago, ILL.

10. Brimm, Jack L. and Jerry B. Ayers. "Attitudes of Students Toward Education and Liberal Arts Courses," Presented before the Mid-South Educational Research Association Meeting, November, 1973, Memphis, TN.

11. Ayers, Jerry B. Report VI-Restudy. A Report of Three Surveys of the 1972 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1973. (mimeo.), 38 pp.

12. Ayers, Jerry B., Florinda A. Bustamante, and Philip J. Campana. "Prediction of Success in College Foreign Language Courses," Educational and Psychological Measurement, 33:939-42, 1973.

13. Rohr, Michael E. and Jerry B. Ayers. "Relationship of Student Grade Expectations, Selected Characteristics, and Academic Performance," The Journal of Experimental Education, 41:58-62, 1973.

14. Ayers, Jerry B. Report 74-1. A Report of Three Surveys of the 1973 Graduates of the Teacher Preparation Programs of Tennessee Technological University. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 34 pp.

15. Riddle, Barbara Ann. Report 74-2. An Evaluation of the Graduate Program in Health and Physical Education at Tennessee Technological University, By a Follow-up Study of the Graduates. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo), 119 pp.

16. Ayers, Jerry B. and Robert E. DuBey. "Student Teachers Attitudes Towards Supervising Teachers," The Educational Catalyst, 4:17-22, 1974.

17. Ayers, Jerry B. and Michael E. Rohr. "Relationship of Selected Variables and Success in a Teacher Preparation Program," Accepted for Publication in Educational and Psychological Measurement, 1974.

18. Ayers, Jerry B. Report 74-3. Study of the Graduates of the Library Science Program of Tennessee Technological University 1969-1973. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.), 28 pp.

19. Bilbrey, Leroy. Human Relations Skills and Teacher Effectiveness. Unpublished M. A. Thesis, College of Education, Tennessee Technological University, 1974.

20. Duncan, Barbara Louise. Study of Graduates of the Counselor Education Program of Tennessee Technological University. Report 74-5. Cookeville, TN: Tennessee Technological University, College of Education, 1974. (mimeo.)

Other Reports of Interest

21. Brooks, Mildred Marie. A Follow-up Study of Teacher Education Graduates, Tennessee Polytechnic Institute, 1958-1963. Unpublished M. A. Thesis, School of Education, Tennessee Polytechnic Institute, 1964..

22. Hearn, Edell M. Reports of various follow-up studies of the graduates of the teacher preparation programs of Tennessee Technological University, 1965 through 1969.

23. Turck, M. J. "A Look at Dogmatism at Tennessee Technological University, The Tennessee Tech Journal, 4:1-7, 1969.

APPENDIX B

Questionnarie - A Follow-up Study of
Teacher Education Graduates of Tennessee
Technological University - Bachelors Degree

A FOLLOW-UP STUDY OF TEACHER EDUCATION GRADUATES OF TENNESSEE TECHNOLOGICAL UNIVERSITY

Please do not write in this space.

Dear Tennessee Tech Graduate:

We are engaged in a study of graduates of the teacher education program here at Tennessee Tech. Our purposes in this study are to determine your appraisals of your college preparation, your teaching experience, and your impressions of your problems. Your thoughtful response to the questions and statements below will be of great help and will be much appreciated. Most statements require only a check and it should take you no more than fifteen minutes to complete this questionnaire. All information will be treated as confidential and only general conclusions representing group data will be reported.

Please accept our thanks for taking a few minutes to fill in the indicated blanks and for returning the questionnaire in the enclosed addressed envelope.

Sincerely yours,

Jerry B. Ayers

JERRY B. AYERS
Administrative Assistant for Special Service

A. GENERAL INFORMATION

Control No. _____ 1-4

1. Name _____ Sex _____ 1. Male _____ 2. Female 5
   LAST FIRST MIDDLE MAIDEN
2. Present Address _____
3. Permanent Mailing Address _____
4. Year of graduation from Tennessee Tech with Bachelor's Degree _____ 6-7
5. Bachelor's Degree from Tennessee Tech _____ 1. B.S. _____ 2. B.A. 8
6. First Teaching Field _____ Second Teaching Field _____ 9-12
7. Area of Teacher Certification _____ 1. Elementary _____ 2. Secondary _____ 3. H & PE or Music Grades 1-12 13
8. Are you now teaching or will you be teaching this fall? _____ 1. Yes _____ 2. No 14

   If you answered Yes to question 8, complete 8 (A). If you answered No to question 8, complete 8 (B).

   (A) School System _____ 15-16
   Name of School _____ Principal _____
   Address of School _____ 17-18
   STREET
   CITY STATE ZIP CODE
   How many years have you taught in this school including the present? _____ 19-20
   At what level will you be generally teaching this fall? _____ 1. Preschool _____ 2. Grades 1-3 _____ 3. Grades 4-6 21
   _____ 4. Grades 7-9 _____ 5. Grades 10-12 _____ 6. Above 12th Grade

   (B) If you are not now teaching, did you teach last year _____ 1. Yes _____ 2. No 22
   If you are not teaching check one of the reasons given _____ 1. Homemaking _____ 2. Military Service
   _____ 3. Continuing formal study _____ 4. Poor salary _____ 5. Working in industry _____ 6. Social work
   _____ 7. Other government work _____ 8. Other reasons (Please specify) _____ 23
9. Total years of teaching experience _____ 24-25
10. Check the following if applicable. Check only if you have completed part or all of the following:
    Master's Degree _____ 1. Yes _____ 2. No If no, how many hours have you completed? _____ 26-30
    School _____
    Specialists or M.S. plus Add. Hrs. _____ 1. Yes _____ 2. No If no, how many hours have you completed? _____ 31-35
    School _____
    Doctorate _____ 1. Yes _____ 2. No If no, how many hours have you completed? _____ 36-40
    School _____
11. Are you teaching in your area of certification? _____ 1. Yes _____ 2. No 41
12. If you answered no to question 11, in what area are you teaching? _____ 42-43
13. Please estimate your salary for the present year _____ 1. less than $5,000 _____ 2. $5,001 to $6,000 _____ 3. $6,001 to $7,000 _____ 4. $7,001 to $8,000 _____ 5. $8,001 to $9,000 _____ 6. $9,001 to $10,000 _____ 7. $10,001 to $11,000 _____ 8. $11,001 to $12,000 _____ 9. More than $12,000 44

14. Your age _____ 1. 20-24 _____ 2. 25-29 _____ 3. 30-34 _____ 4. 35-39 _____ 5. 40-49 _____ 6. 50 and over 45

15. Marital status _____ 1. Single _____ 2. Married _____ 3. Divorced _____ 4. Widowed 46

16. Number of children (if any) _____ 47 49

17. Occupation of spouse (if married) _____

18. When did you first become interested in teaching? _____ 1. During high school _____ 2. During first two years of college _____ 3. During last two years of college _____ 4. Other 49

19. Was teaching your first choice as a career? _____ 1. Yes _____ 2. No 50

B. TEACHER PREPARATION PROGRAM

In order to evaluate your teacher preparation program, we would appreciate your indicating the degree to which you feel your college experiences were satisfactory in equipping you with the necessary skills and understandings in the following areas. Please check the appropriate space for each item.

	1 Very Unsatisfactory	2 Somewhat Unsatisfactory	3 Neither satisfactory nor Unsatisfactory	4 Somewhat Satisfactory	5 Very Satisfactory	
1. Your teaching personality:						
a. Ability to work with children	_____	_____	_____	_____	_____	51
b. Ability to work with colleagues	_____	_____	_____	_____	_____	52
c. Ability to work with members of the community	_____	_____	_____	_____	_____	53
d. Ability to maintain a friendly disposition	_____	_____	_____	_____	_____	54
e. Ability to lead a well-rounded life, to enjoy work and play	_____	_____	_____	_____	_____	55
f. Ability to work with parents	_____	_____	_____	_____	_____	56
2. Your general knowledge and understanding of:						
a. The physical sciences	_____	_____	_____	_____	_____	57
b. The biological sciences	_____	_____	_____	_____	_____	58
c. American culture and institutions	_____	_____	_____	_____	_____	59
d. Art, music, literature, philosophy	_____	_____	_____	_____	_____	60
e. Mathematics	_____	_____	_____	_____	_____	61
3. Your ability to use the English language effectively	_____	_____	_____	_____	_____	62
4. Your knowledge and understanding of the subjects which you teach	_____	_____	_____	_____	_____	63
5. Your understanding of children and youth:						
a. Insight into causes of behavior	_____	_____	_____	_____	_____	64
b. Skill in working with exceptional children (the bright, the dull, the handicapped)	_____	_____	_____	_____	_____	65
c. Skill in group work	_____	_____	_____	_____	_____	66
d. Skill in maintaining discipline	_____	_____	_____	_____	_____	67
e. Skill in guidance of children	_____	_____	_____	_____	_____	68
6. Your understanding of the nature of the learning process:						
a. Skill in helping students determine objectives	_____	_____	_____	_____	_____	69
b. Skill in motivating students	_____	_____	_____	_____	_____	70
c. Skill in pupil-teacher planning	_____	_____	_____	_____	_____	71
d. Skill in using a variety of teaching methods	_____	_____	_____	_____	_____	72
e. Skill in evaluating pupil growth and class procedures with pupils	_____	_____	_____	_____	_____	73
f. Ability to construct appropriate tests and learning materials	_____	_____	_____	_____	_____	74
g. Skill in the application of learning theory in the classroom	_____	_____	_____	_____	_____	75
h. Skill in providing differentiated learning experiences for various groups and individuals	_____	_____	_____	_____	_____	76
7. Your knowledge of sources of teaching materials:						
a. Printed materials	_____	_____	_____	_____	_____	77
b. Audio-visual materials	_____	_____	_____	_____	_____	78
c. Community resources	_____	_____	_____	_____	_____	79 80 1
d. Library and library materials	_____	_____	_____	_____	_____	5

8. Your ability to use teaching materials effectively	____	____	____	____	____	6
9. Your knowledge and understanding of:						
a. The purposes of the school in relation to the overall purpose of society	____	____	____	____	____	7
b. The social structure of the community and its meaning for education	____	____	____	____	____	8
c. The institutions of the community	____	____	____	____	____	9
d. The different value-patterns of social-economic classes	____	____	____	____	____	10
e. The economic life of the community	____	____	____	____	____	11
f. Appropriate ethical behavior of the teacher	____	____	____	____	____	12

10. Your evaluation of the following teacher preparation experiences:	Very Unsatisfactory 1	Somewhat Unsatisfactory 2	Neither Satisfactory nor Unsatisfactory 3	Somewhat Satisfactory 4	Very Satisfactory 5	Did Not Teach At TTU 6	
a. INTRODUCTION TO TEACHING	____	____	____	____	____	____	13
b. GENERAL PSYCHOLOGY	____	____	____	____	____	____	14
c. HUMAN GROWTH AND DEVELOPMENT	____	____	____	____	____	____	15
d. EDUCATIONAL PSYCHOLOGY	____	____	____	____	____	____	16
e. SOCIAL FOUNDATIONS OF EDUCATION	____	____	____	____	____	____	17
f. HISTORY AND PHILOSOPHY OF EDUCATION	____	____	____	____	____	____	18
g. EVALUATION AND GUIDANCE	____	____	____	____	____	____	19
h. METHODS COURSES	____	____	____	____	____	____	20
i. MICRO TEACHING	____	____	____	____	____	____	21
j. STUDENT TEACHING	____	____	____	____	____	____	22

11 How would you rate the quality of instruction in the college of education in comparison to the quality of instruction in your major teaching field? ____ 1. very unsatisfactory ____ 2. somewhat unsatisfactory ____ 3. neither unsatisfactory nor satisfactory ____ 4. somewhat satisfactory ____ 5. very satisfactory. 23

C. OBTAINING EMPLOYMENT

1. If you are teaching, how did you get your teaching job? ____ 1. Commercial employment agency ____ 2. Placement service at Tech ____ 3. Personal application ____ 4. Professor at Tech ____ 5. Other (Specify) ____. 24

2. If you are not teaching, did you attempt to find a job teaching? ____ 1. Yes ____ 2. No. 25

3. If you answered "yes" to the above, briefly explain your problems in locating a job. This is extremely important to the College of Education. 80 a 2

____

____

____

____

APPENDIX C

Questionnaire - A Follow-up Study of Master of Arts Graduates of Tennessee Technological University

A FOLLOW-UP STUDY OF MASTER OF ARTS GRADUATES OF TENNESSEE TECHNOLOGICAL UNIVERSITY

Please do not write in this space.

Dear Tennessee Tech Graduate

We are engaged in a study of graduates of the teacher education program here at Tennessee Tech. Our purposes in this study are to determine your appraisals of your college preparation, your teaching experience, and your impressions of your problems. Your thoughtful response to the questions and statements below will be of great help and will be much appreciated. Most statements require only a check and it should take you no more than fifteen minutes to complete this questionnaire. All information will be treated as confidential and only general conclusions representing group data will be reported.

Please accept our thanks for taking a few minutes to fill in the indicated blanks and for returning the questionnaire in the enclosed addressed envelope.

Sincerely yours,

Jerry B. Ayers

JERRY B. AYERS
Administrative Assistant for Special Service

Control No. _____ 1-4

1. Name _____ Sex _____ 1. Male _____ 2. Female 5
LAST FIRST MIDDLE MAIDEN

2. Present Address _____

3. Permanent Mailing Address _____

4. Age _____ 1. 20-24 _____ 2. 25-29 _____ 3. 30-34 _____ 4. 35-39 _____ 5. 40-49 _____ 6. 50 & over 6

5. Marital Status _____ 1. Single _____ 2. Married _____ 3. Divorced _____ 4. Widowed 7

6. Dates you were working toward the Master's degree at Tech. From _____ year to _____ year. 8-11

7. Age when you first registered for graduate work at Tennessee Tech _____. 12-13

8. Where did you complete your Bachelor's degree? _____ ☐☐ 14-15

9. In what year did you receive your Bachelor's degree? _____ 16-17

10. What was your graduate major at Tennessee Tech? _____ 1. Administration and Supervision _____ 2. Guidance and Counseling _____ 3. Curriculum and Instruction - Elementary _____ 4. Reading _____ 5. Curriculum and Instruction - Secondary _____ 6. Health and Physical Education. 18

11. What was your principal minor area? _____ ☐☐ 19-20

12. Please indicate the position that you held during the current school year. _____ 1. Teacher _____ 2. Student _____ 3. Military _____ 4. Homemaker _____ 5. Principal _____ 6. Supervisor _____ 7. Librarian _____ 8. University Administrator _____ 9. Counselor _____ 10. Other. 21

School System _____

Name of School _____

Address of School _____ ☐☐ 22-23

_____
City State Zip Code

13. Please indicate your salary for the current school year _____ 1. Less than $7,000 _____ 2. $7,001 to $8,000 _____ 3. $8,001 to $9,000 _____ 4. $9,001 to $10,000 _____ 5. $10,001 to $11,000 _____ 6. $11,001 to $12,000 _____ 7. More than $12,000. 24

14. Did you complete any graduate work at other institutions prior to enrolling at Tech? _____ 1. Yes _____ 2. No. If yes, at what institution _____ 25

15. How did you get your present job? _____ 1. Commercial employment agency _____ 2. Tech Placement Office _____ 3. Personal Application _____ 4. Professor at Tech _____ 5. Other. 26

16. Did you receive financial assistance during your period of graduate work at Tech? _____ 1. None _____ 2. Assistantship _____ 3. Loan _____ 4. Other. 27

17. Check the following if applicable. Check only if you have completed part or all of the following: 28

Specialists _____ 1. Yes _____ 2. No; If no, how many hours have you completed _____

School _____ Doctorate _____ 1. Yes _____ 2. No; If no, how many hours have you completed _____ School _____ 29

FOLLOWING ARE QUESTIONS THAT ARE RELATED DIRECTLY TO YOUR PROGRAM OF STUDY AT TECH.

18. Please rate each of the following points.

	Very unsatisfactory 1	Somewhat unsatisfactory 2	Neither satisfactory nor unsatisfactory 3	Somewhat satisfactory 4	Very satisfactory 5	6 No Opinion
a. Interest of professors in students						
b. Announcements of deadlines						
c. Accessibility of professors						
d. Amount of guidance given in planning and carrying out program						
e. Personal relationship with professors						
f. Placement service						
g. Library staff						
h. Periodicals contained in library						
i. Adequacy of books and other materials contained in library						
j. Adequacy of Learning Resources Center in College of Education						
k. Instruction in major field						
l. Instruction in minor						
m. Scheduling of courses						

19. Please rate the overall value of the following courses in relation to your career objectives.

	Very unsat unsatisfactory 1	Somewhat unsatisfactory 2	Neither satisfactory nor unsatisfactory 3	Somewhat satisfactory 4	Very satisfactory 5	6 Did not take
Educational Research						
Educational Statistics						
Field Experience or Practicum						
Research Report or Problem						
Thesis						
Public School Administration						
Supervision of Instruction						
Curriculum Development						
School Community Relations						
History of Western Education						
Educational Sociology						
Introduction to Guidance						
Counseling Techniques						
Informational Materials for Counselors						
Measurement and Evaluation						
Courses in the Teaching of Reading						

69/70

20. Did you take any courses in the resident centers maintained by Tech while working toward your M.A.? _____ 1. Yes _____ 2. No. 59

21. If you answered yes to question 21, how would you rate the quality of instruction in comparison to the quality of instruction that you received on campus? _____ 1. Poor _____ 2. Fair _____ 3. About the same _____ 4. Good _____ 5. Excellent. 60

22. Please list several recommendations for improvements of the graduate programs of the College of Education.

23. List several strengths of the graduate program of the College of Education.

24. List several weaknesses of the graduate programs of the College of Education.

25. Do you think the research component of your graduate program was _____ 1. Very Unsatisfactory; _____ 2. Somewhat unsatisfactory; _____ 3. Neither unsatisfactory nor satisfactory; _____ 4. Somewhat satisfactory; _____ 5. Very satisfactory. If you checked 1, 2, or 3 above, please list several ways that the research component can be improved. 61

26. Do you think the practicum and laboratory experiences were _____ 1. Very unsatisfactory; _____ 2. Somewhat unsatisfactory; _____ 3. Neither unsatisfactory nor satisfactory; _____ 4. Somewhat satisfactory _____ 5. Very satisfactory. If you checked 1, 2, or 3 please list several ways that the practicum and laboratory experiences can be improved. 62

80-1

APPENDIX D

Principal's Questionnaire
A Follow-up Study of Teacher Education Graduates of Tennessee Technological University

A FOLLOW-UP STUDY OF TEACHER EDUCATION GRADUATES OF TENNESSEE TECHNOLOGICAL UNIVERSITY

Please do no write in this space.

Dear Principal:

We are engaged in a study of graduates of the teacher education program here at Tennessee Tech. Our purposes in this study are to determine the effectiveness of our graduates and to gather information on how our teacher education program can be improved. The teacher in your school listed below is a graduate of our teacher education program. We would appreciate your taking a few minutes to complete this questionnaire about this person and returning it to us in the enclosed addressed envelope. All information will be treated as confidential and only general conclusions representing group data will be reported. Please accept our thanks for completing this questionnaire.

Sincerely yours,

JERRY B. AYERS, Ed.D.
Administrative Assistant for
Special Services, College of
Education

Name of Tennessee Technological University Graduate: _____

Control Number: _____ 1-4

Please rate our graduate in relation to other teachers on your staff on the following points. Please check the appropriate space for each item.

	No opportunity to observe 0	Very unsatisfactory 1	Somewhat unsatisfactory 2	Neither satisfactory nor unsatisfactory 3	Somewhat satisfactory 4	Very satisfactory 5	
1. Understanding the goals of the school	____	____	____	____	____	____	5
2. Personal appearance	____	____	____	____	____	____	6
3. Enthusiasm for the teaching profession	____	____	____	____	____	____	7
4. Adaptability in the classroom	____	____	____	____	____	____	8
5. Cooperation and dependability	____	____	____	____	____	____	9
6. Attitudes toward children	____	____	____	____	____	____	10
7. Attitudes toward fellow teachers	____	____	____	____	____	____	11
8. Attitudes toward supervisors	____	____	____	____	____	____	12
9. Accuracy in maintaining official records and reports	____	____	____	____	____	____	13
10. Understanding and using courses of study and curriculum guides	____	____	____	____	____	____	14
11. Making effective use of community resources	____	____	____	____	____	____	15
12. Handling disciplinary problems	____	____	____	____	____	____	16
13. Getting acquainted with the community and its people	____	____	____	____	____	____	17
14. Keeping abreast of recent professional developments	____	____	____	____	____	____	18
15. Evaluating pupil progress	____	____	____	____	____	____	19
16. Motivating pupils who seem disinterested	____	____	____	____	____	____	20
17. Relationships with parents	____	____	____	____	____	____	21
18. Participation in professional activities	____	____	____	____	____	____	22
19. Potential for advancement in the profession	____	____	____	____	____	____	23
20. Relationships with fellow teachers	____	____	____	____	____	____	24
21. Overall effectiveness of this person in comparison with other teachers in your school	____	____	____	____	____	____	25
22. Overall qualifications of this person to teach in your particular school situation	____	____	____	____	____	____	26

In order to evaluate our teacher preparation program, we would appreciate your indicating the degree to which you feel this person was equipped with the necessary skills and understandings in the following areas. Please check the appropriate space for each item.

(over)

	No opportunity to observe 0	Very unsatisfactory 1	Somewhat unsatisfactory 2	Neither satisfactory nor unsatisfactory 3	Somewhat satisfactory 4	Very satisfactory 5	
1. Teaching personality:							
a. Ability to work with children							27
b. Ability to work with colleagues							28
c. Ability to work with members of the community							29
d. Ability to maintain a friendly disposition							30
e. Ability to lead a well-rounded life, to enjoy work and play							31
f. Ability to work with parents							32
2. General knowledge and understanding of:							
a. The physical sciences							33
b. The biological sciences							34
c. American culture and institutions							35
d. Art, music, literature, philosophy							36
e. Mathematics							37
3. Ability to use the English language effectively							38
4. Knowledge and understanding of the subject taught							39
5. Understanding of children and youth:							
a. Insight into causes of behavior							40
b. Skill in working with exceptional children (the bright, the dull, the handicapped)							40
c. Skill in group work							41
d. Skill in maintaining discipline							42
e. Skill in guidance of children							43
6. Understanding of the nature of the learning process							44
a. Skill in helping students determine objectives							45
b. Skill in motivating students							46
c. Skill in pupil-teacher planning							47
d. Skill in using a variety of teaching methods							48
e. Skill in evaluating pupil growth and class procedures with pupils							49
f. Ability to construct appropriate tests and learning materials							50
g. Skill in the application of learning theory in the classroom							51
h. Skill in providing differentiated learning experiences for various groups and individuals							52
7. Knowledge of sources of teaching materials:							
a. Printed materials							53
b. Audio-visual materials							54
c. Community resources							55
d. Library and library materials							56
8. Ability to use teaching materials effectively							57
9. Knowledge and understanding of:							
a. The purposes of the school in relation to the overall purpose of society							58
b. The social structure of the community and its meaning for education							59
c. The institutions of the community							60
d. The different value-patterns of social-economic classes							61
e. The economic life of the community							62
f. Appropriate ethical behavior of the teacher							63

APPENDIX F

Teacher Evaluation by Supervisor Form

ID No._____

Name:_____ Date:_____

Teaching is the most important task of the school. In order to help the school to be informed regarding the quality of its teaching, you are requested to indicate your opinion of the above named instructor's performance in the four important dimensions of teaching described on the following pages. The highest rating is number 5; the lowest is number 1. Please encircle the number that represents your opinion of the individual. Three of the five ratings for each dimension are described by words and phrases printed to the left of the numbers. The intermediate numbers may also be used for the expression of your opinions.

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
Subject Matter Competence	Thorough, broad, and accurate knowledge of theory and practice; very able to organize, interpret, explain and illustrate concepts and relationships.	5
		4
	Adequate understanding; most interpretations and explanations are clear	3
		2
	Knowledge of subject is limited; does not give clear explanations and illustrations.	1
Relations with Students	Excellent rapport; feeling of good-will prevails; very interested in students; easily approached; students are challenged yet individuality is respected.	5
		4
	Adequate rapport; shows some interest in students; usually approachable; students are encouraged to participate; shows some sense of humor	3
		2
	Seems unfriendly and unresponsive; impatient; sometimes antagonizes students; too busy to be helpful.	1

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
Appropriateness of Assignments and Academic Expectations	Assignments are challenging; he allows for differences of ability but expects superior achievement; stresses important topics and concepts and avoids giving time to trivial details; demands critical and analytical thought; tests seem valid.	5
		4
	Most assignments are clear, reasonable and related to class work; expects understanding not memorization; recognizes individual differences among students but generally seems to ignore them; tests are usually related to assignments and class work.	3
		2
	Assignments are unrealistic, often not clear, not related to class work; students do not know what the teacher expects; tests seem unrelated to assignments and class work.	1

DIMENSIONS OF TEACHING	DESCRIPTIVE WORDS AND PHRASES	RATING
Overall Classroom Effectiveness	Lessons are carefully planned and show definite purpose; words come easily; well-organized ideas and concepts are clearly related; enthusiastic and stimulating; raises thought provoking questions; discussions are lively; pleasing manner, free from annoying mannerisms.	5
		4
	Usually well-prepared, purposes are usually clear; presentations are fairly well-organized; encourages student participation; objectionable mannerisms are not serious or numerous; asks some good questions.	3
		2
	Lessons not planned, purposes are lacking or vague; relationships of concepts are not explained; asks few questions; subject seems uninteresting to him; repeatedly exhibits annoying mannerisms.	1

You may wish to comment further on this instructor's teaching performance. If so, you may use the space below and the back of this page.

APPENDIX F

California F-Scale: Forms 45 and 40

ID No._____

Name:_____ Date:_____

F-SCALE: FORMS 45 AND 40

The following statements refer to opinions regarding a number of social groups and issues, about which some people agree and others disagree. Please mark each statement in the left-hand margin according to your agreement or disagreement as follows:

+1: slight support, agreement
+2: moderate support, agreement
+3: strong support, agreement

-1: slight opposition, disagreement
-2: moderate opposition, disagreement
-3: strong opposition, disagreement

_____1. Obedience and respect for authority are the most important virtues children should learn.

_____2. A person who has bad manners, habits, and breeding can hardly expect to get along with decent people.

_____3. If people would talk less and work more, everybody would be better off.

_____4. The business man and the manufacturer are much more important to society than the artist and the professor.

_____5. Science has its place, but there are many important things that can never be understood by the human mind.

_____6. Every person should have complete faith in some supernatural power whose decisions he obeys without question.

_____7. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.

_____8. What this country needs most, more than laws and political programs, is a few courageous, tireless, devoted leaders in whom the people can put their faith.

_____9. Nobody ever learned anything really important except through suffering.

F-SCALE Continued

_____10. No sane, normal, decent person could ever think of hurting a close friend or relative.

_____11. What the youth needs most is strict discipline, rugged determination and the will to work and fight for family and country.

_____12. An insult to our honor should always be punished.

_____13. Sex crimes, such as rape and attacks on children, deserve more than mere imprisonment; such criminals ought to be publicly whipped, or worse.

_____14. There is hardly anything lower than a person who does not feel a great love, gratitude, and respect for his parents.

_____15. Most of our social problems would be solved if we could somehow get rid of the immoral, crooked, and feeble-minded people.

_____16. Homosexuals are hardly better than criminals and ought to be severely punished.

_____17. When a person has a problem or worry, it is best for him not to think about it, but to keep busy with more cheerful things.

_____18. Nowadays more and more people are prying into matters that should remain personal and private.

_____19. Some people are born with an urge to jump from high places.

_____20. People can be divided into two distinct classes: the weak and the strong.

_____21. Some day it will probably be shown that astrology can explain a lot of things.

_____22. Wars and social trouble may someday be ended by earthquake or flood that will destroy the whole world.

_____23. No weakness or difficulty can hold us back if we have enough will power.

_____24. Most people don't realize how much our lives are controlled by plots hatched in secret places.

_____25. Human nature being what it is, there will always be war and conflict.

_____26. Familiarity breeds contempt.

F-SCALE Continued

_____27. Nowadays when so many different kinds of people move around and mix together so much, a person has to protect himself especially carefully against catching an infection or disease from them.

_____28. The wild sex life of the old Greeks and Romans was tame compared to some of the goings-on in this country, even in places where people might least expect it.

STUDENT EVALUATION OF TEACHING

D. J. VELDMAN and R. F. PECK

TEACHER'S LAST NAME: _____

SUBJECT: _____

SCHOOL: _____

CIRCLE THE RIGHT CHOICES BELOW

Teacher's Sex: M F

My Sex: M F

My Grade Level:

3 4 5 6 7 8 9 10 11 12

DO NOT USE

CIRCLE ONE OF THE FOUR CHOICES IN FRONT OF EACH STATEMENT.
THE FOUR CHOICES MEAN:

F = Very Much False
f = More False Than True
t = More True Than False
T = Very Much True

This Teacher:

F f t T	is always friendly toward students.
F f t T	knows a lot about the subject.
F f t T	is never dull or boring.
F f t T	expects a lot from students.
F f t T	asks for students' opinions before making decisions.
F f t T	is usually cheerful and optimistic.
F f t T	is not confused by unexpected questions.
F f t T	makes learning more like fun than work.
F f t T	doesn't let students get away with anything.
F f t T	often gives students a choice in assignments.

APPENDIX H

Classroom Observation Record

Classroom Observation Record

Teacher Characteristics Study

Teacher_____ No.____ Sex____ Class or Subject_____ Date_____

City_____ School_____ Time_____ Observer_____

PUPIL BEHAVIOR **REMARKS:**

1.	Apathetic	1	2	3	4	5	6	7	N	Alert
2.	Obstructive	1	2	3	4	5	6	7	N	Responsible
3.	Uncertain	1	2	3	4	5	6	7	N	Confident
4.	Dependent	1	2	3	4	5	6	7	N	Initiating

TEACHER BEHAVIOR

5.	Partial	1	2	3	4	5	6	7	N	Fair
6.	Autocratic	1	2	3	4	5	6	7	N	Democratic
7.	Aloof	1	2	3	4	5	6	7	N	Responsive
8.	Restricted	1	2	3	4	5	6	7	N	Understanding
9.	Harsh	1	2	3	4	5	6	7	N	Kindly
10.	Dull	1	2	3	4	5	6	7	N	Stimulating
11.	Stereotyped	1	2	3	4	5	6	7	N	Original
12.	Apathetic	1	2	3	4	5	6	7	N	Alert
13.	Unimpressive	1	2	3	4	5	6	7	N	Attractive
14.	Evading	1	2	3	4	5	6	7	N	Responsible
15.	Erratic	1	2	3	4	5	6	7	N	Steady
16.	Excitable	1	2	3	4	5	6	7	N	Poised
17.	Uncertain	1	2	3	4	5	6	7	N	Confident
18.	Disorganized	1	2	3	4	5	6	7	N	Systematic
19.	Inflexible	1	2	3	4	5	6	7	N	Adaptable
20.	Pessimistic	1	2	3	4	5	6	7	N	Optimistic
21.	Immature	1	2	3	4	5	6	7	N	Integrated
22.	Narrow	1	2	3	4	5	6	7	N	Broad

FIGURE 1

Generalized Descriptions of Critical Behaviors of Teachers

Effective Behaviors	Ineffective Behaviors
1. Alert, appears enthusiastic.	1. Is apathetic, dull, appears bored.
2. Appears interested in pupils and classroom activities.	2. Appears uninterested in pupils and classroom activities.
3. Cheerful, optimistic.	3. Is depressed, pessimistic; appears unhappy.
4. Self-controlled, not easily upset.	4. Looses temper, is easily upset.
5. Likes fun, has a sense of humor.	5. Is overly serious, too occupied for humor.
6. Recognizes and admits own mistakes.	6. Is unaware of, or fails to admit, own mistakes.
7. Is fair, impartial, and objective in treatment of pupils.	7. Is unfair or partial in dealing with pupils.
8. Is patient.	8. Is impatient.
9. Shows understanding and sympathy in working with pupils.	9. Is short with pupils, uses sarcastic remarks, or in other ways shows lack of sympathy with pupils.
10. Is friendly and courteous in relations with pupils.	10. Is aloof, and removed in relations with pupils.
11. Helps pupils with personal as well as educational problems.	11. Seems unaware of pupils' personal needs and problems.
12. Commends effort and gives praise for work well done.	12. Does not commend pupils, is disapproving, hypercritical.
13. Accepts pupils' efforts as sincere.	13. Is suspicious of pupil motives.
14. Anticipates reactions of others in social situations.	14. Does not anticipate reactions of others in social situations.
15. Encourages pupils to try to do their best.	15. Makes no effort to encourage pupils to try to do their best.
16. Classroom procedure is planned and well organized.	16. Procedure is without plan, disorganized.
17. Classroom procedure is flexible within over-all plan.	17. Shows extreme rigidity of procedure, inability to depart from plan.
18. Anticipates individual needs.	18. Fails to provide for individual differences and needs of pupils.
19. Stimulates pupils through interesting and original materials and techniques.	19. Uninteresting materials and teaching techniques used.
20. Conducts clear practical demonstrations and explanations.	20. Demonstrations and explanations are not clear and are poorly conducted.
21. Is clear and thorough in giving directions.	21. Directions are incomplete, vague.

Figure 1 (Continued)

22. Encourages pupils to work through their own problems and evaluate their accomplishments.	22. Fails to give pupils opportunity to work out own problems or evaluate their own work.
23. Disciplines in quiet, dignified, and positive manner.	23. Reprimands at length, ridicules, resorts to cruel or meaningless forms of correction.
24. Gives help willingly.	24. Fails to give help or gives it grudgingly.
25. Foresees and attempts to resolve potential difficulties.	25. Is unable to foresee and resolve potential difficulties.

Figure 2 (Continued)

GLOSSARY

(To be used with classroom observation record.)

Pupil Behaviors

1. Apathetic-Alert Pupil Behavior

Apathetic

1. Listless.
2. Bored-acting.
3. Enter into activities half-heartedly.
4. Restless.
5. Attention wanders.
6. Slow in getting under way.

Alert

1. Appear anxious to recite & participate.
2. Watch teacher attentively.
3. Work concentratedly.
4. Seem to respond eagerly.
5. Prompt and ready to take part in activities when they begin.

2. Obstructive-Responsible Pupil Behavior

Obstructive

1. Rude to one another and/or to teacher.
2. Interrupting; demanding attention; disturbing.
3. Obstinate; sullen.
4. Refusal to participate.
5. Quarrelsome; irritable.
6. Engaged in name-calling and/or tattling.
7. Unprepared.

Responsible

1. Courteous, co-operative, friendly with each other and with teacher.
2. Complete assignments without complaining or unhappiness.
3. Controlled voices.
4. Received help and criticism attentively.
5. Asked for help when needed.
6. Orderly without specific directions from teacher.
7. Prepared.

3. Uncertain-Confident Pupil Behavior

Uncertain

1. Seem afraid to try; unsure.
2. Hesitant; restrained.
3. Appear embarrassed.
4. Frequent display of nervous habits, nail-biting, etc.
5. Appear shy and timid.
6. Hesitant and/or stammering speech.

Confident

1. Seem anxious to try new problems or activities.
2. Undisturbed by mistakes.
3. Volunteer to recite.
4. Enter freely into activities.
5. Appear relaxed.
6. Speak with assurance.

4. Dependent-Initiating Pupil Behavior

Dependent

1. Rely on teacher for explicit directions.
2. Show little ability to work things out for selves.
3. Unable to proceed when initiative called for.
4. Appear reluctant to take lead or to accept responsibility.

Initiating

1. Volunteer ideas and suggestions.
2. Showed resourcefulness.
3. Take lead willingly.
4. Assume responsibilities without evasion.

Figure 2 (Continued)

Teacher Behaviors

5. Partial-Fair Teacher Behavior

Partial	Fair
1. Repeatedly slighted a pupil.	1. Treated all pupils approximately equally.
2. Corrected or criticized certain pupils repeatedly.	2. In case of controversy pupil allowed to explain his side.
3. Repeatedly gave a pupil special advantages.	3. Distributed attention to many pupils.
4. Gave most attention to one or a few pupils.	4. Rotated leadership impartially.
5. Showed prejudice (favorable or unfavorable) towards some social, racial, or religious groups.	5. Based criticism or praise on factual evidence, not hearsay.
6. Expressed suspicion of motives of a pupil.	

6. Autocratic-Democratic Teacher Behavior

Autocratic	Democratic
1. Tells pupils each step to take.	1. Guided pupils without being mandatory.
2. Intolerant of pupils' ideas.	2. Exchanged ideas with pupils.
3. Mandatory in giving directions; orders to be obeyed at once.	3. Encouraged (asked for) pupil opinion.
4. Interrupted pupils although their discussion was relevant.	4. Encouraged pupils to make own decisions.
5. Always directed rather than participated.	5. Entered into activities without domination.

7. Aloof-Responsive Teacher Behavior

Aloof	Responsive
1. Stiff and formal in relations with pupils.	1. Approachable to all pupils.
2. Apart; removed from class activity.	2. Participates in class activity.
3. Condescending to pupils.	3. Responded to reasonable requests and/or questions.
4. Routine and subject matter only concern; pupils as persons ignored.	4. Speaks to pupils as equals.
5. Referred to pupil as "this child" or "that child."	5. Commends effort.
	6. Gives encouragement.
	7. Recognized individual differences.

8. Restricted-Understanding Teacher Behavior

Restricted	Understanding
1. Recognized only academic accomplishments of pupils; no concern for personal problems.	1. Showed awareness of a pupil's personal emotional problems and needs.
2. Completely unsympathetic with a pupil's failure at a task.	2. Was tolerant of error on part of pupil.
3. Called attention only to very good or very poor work.	3. Patient with a pupil beyond ordinary limits of patience.
4. Was impatient with a pupil.	4. Showed what appeared to be sincere sympathy with a pupils' viewpoint.

Figure 2 (Continued)

9. Harsh-Kindly Teacher Behavior

Harsh	Kindly
1. Hypercritical; fault-finding.	1. Goes out of way to be pleasant and/or to help pupils; friendly.
2. Cross; curt.	2. Give a pupil a deserved compliment.
3. Depreciated pupil's efforts; was sarcastic.	3. Found good things in pupils to call attention to.
4. Scolds a great deal.	4. Seemed to show sincere concern for a pupil's personal problem.
5. Lost temper.	5. Showed affection without being demonstrative.
6. Used threats.	6. Disengaged self from a pupil without bluntness.
7. Permitted pupils to laugh at mistakes of others.	

10. Dull-Stimulating Teacher Behavior

Dull	Stimulating
1. Uninteresting, monotonous explanations.	1. Highly interesting presentation; gets and holds attention without being flashy.
2. Assignments provide little or no motivation.	2. Clever and witty, though not smart-alecky or wise-cracking.
3. Fails to provide challenge.	3. Enthusiastic; animated.
4. Lack of animation.	4. Assignments challenging.
5. Failed to capitalize on pupil interests.	5. Took advantage of pupil interests.
6. Pedantic, boring.	6. Brought lesson successfully to a climax.
7. Lacks enthusiasm; bored acting.	7. Seemed to provoke thinking.

11. Stereotyped-Original Teacher Behavior

Stereotyped	Original
1. Used routine procedures without variation.	1. Used what seemed to be original and relatively unique devices to aid instruction.
2. Would not depart from procedure to take advantage of a relevant question or situation.	2. Tried new materials or methods.
3. Presentation seemed unimaginative.	3. Seemed imaginative and able to develop presentation around a question or situation.
4. Not resourceful in answering questions or providing explanations.	4. Resourceful in answering question; had many pertinent illustrations available.

12. Apathetic-Alert Teacher Behavior

Apathetic	Alert
1. Seemed listless; languid; lacked enthusiasm.	1. Appeared buoyant; wide-awake; enthusiastic about activity of the moment.
2. Seemed bored by pupils.	2. Kept constructively busy.
3. Passive in response to pupils.	3. Gave attention to, and seemed interested in, what was going on in class.
4. Seemed preoccupied.	4. Prompt to "pick up" class when pupils' attention showed signs of lagging.
5. Attention seemed to wander.	
6. Sat in chair most of time; took no active part in class activities.	

Figure 2 (Continued)

Unimpressive-Attractive Teacher Behavior

Unimpressive	Attractive
1. Untidy or sloppily dressed.	1. Clean and neat.
2. Inappropriately dressed.	2. Well-groomed; dress showed good taste.
3. Drab, colorless.	3. Posture and bearing attractive.
4. Posture and bearing unattractive.	4. Free from distracting personal habits.
5. Possessed distracting personal habits.	5. Plainly audible speech; good expression; agreeable voice tone; good inflection.
6. Mumbled; inaudible speech; limited expression; disagreeable voice tone; poor inflection.	

14. Evading-Responsible Teacher Behavior

Evading	Responsible
1. Avoided responsibility; disinclined to make decisions.	1. Assumed responsibility; makes decisions as required.
2. "Passed the buck" to class, to other teachers, etc.	2. Conscientious.
3. Left learning to pupil, failing to give adequate help.	3. Punctual.
4. Let a difficult situation get out of control.	4. Painstaking; careful.
5. Assignments and directions indefinite.	5. Suggested aids to learning.
6. No insistance on either individual or group standards.	6. Controlled a difficult situation.
7. Inattentive with pupils.	7. Gave definite directions.
8. Cursory.	8. Called attention to standards of quality.
	9. Attentive to class.
	10. Thorough.

15. Erratic-Steady Teacher Behavior

Erratic	Steady
1. Impulsive; uncontrolled; temperamental; unsteady.	1. Calm; controlled.
2. Course of action easily swayed by circumstances of the moment.	2. Maintained progress toward objective.
3. Inconsistent.	3. Stable, consistent, predictable.

16. Excitable-Poised Teacher Behavior

Excitable	Poised
1. Easily disturbed and upset; flustered by classroom situation.	1. Seemed at ease at all times.
2. Hurried in class activities; spoke rapidly using many words and gestures.	2. Unruffled by situation that developed in classroom; dignified without being stiff or formal.
3. Was "jumpy"; nervous.	3. Unhurried in class activities; spoke quietly and slowly.
	4. Successfully diverted attention from a stress situation in classroom.

17 Uncertain-Confident Teacher Behavior

Uncertain	Confident
1. Seemed unsure of self; faltering, hesitant.	1. Seemed sure of self; self-confident in relations with pupils.
2. Appeared timid and shy.	2. Undisturbed and unembarrassed by mistakes and/or criticism.
3. Appeared artificial.	
4. Disturbed and embarrassed by mistakes and/or criticism.	

Figure 2 (Continued)

18. Disorganized-Systematic Teacher Behavior

Disorganized	Systematic
1. No plan for class work.	1. Evidence of a planned though flexible procedure.
2. Unprepared.	2. Well prepared.
3. Objectives not apparent; undecided as to next step.	3. Careful in planning with pupils.
4. Wasted time.	4. Systematic about procedure of class.
5. Explanations not to the point.	5. Had anticipated needs.
6. Easily distracted from matter at hand.	6. Provided reasonable explanations.
	7. Held discussion together; objectives apparent.

19. Inflexible-Adaptable Teacher Behavior

Inflexible	Adaptable
1. Rigid in conforming to routine.	1. Flexible in adapting explanations.
2. Made no attempt to adapt materials to individual pupils.	2. Individualized materials for pupils as required; adapted activities to pupils.
3. Appeared incapable of modifying explanation or activities to meet particular classroom situations.	3. Took advantage of pupils' questions to further clarify ideas.
4. Impatient with interruptions and digressions.	4. Met an unusual classroom situation competently.

20. Pessimistic-Optimistic Teacher Behavior

Pessimistic	Optimistic
1. Depressed; unhappy.	1. Cheerful; good-natured.
2. Skeptical.	2. Genial.
3. Called attention to potential "bad."	3. Joked with pupils on occasion.
4. Expressed hopelessness of "education today," the school system, or fellow educators.	4. Emphasized potential "good."
5. Noted mistakes; ignored good points.	5. Looked on bright side; spoke optimistically of the future.
6. Frowned a great deal; had unpleasant facial expression.	6. Called attention to good points; emphasized the positive.

21. Immature-Integrated Teacher Behavior

Immature	Integrated
1. Appeared naive in approach to classroom situations.	1. Maintained class as center of activity; kept self out of spotlight; referred to class's activities, not own.
2. Self-pitying; complaining; demanding.	2. Emotionally well controlled.
3. Boastful; conceited.	

22. Narrow-Broad Teacher Behavior

Narrow	Broad
1. Presentation strongly suggested limited background in subject or material; lack of scholarship.	1. Presentation suggested good background in subject; good scholarship suggested.
2. Did not depart from text.	2. Drew examples and explanations from various sources and related fields.
3. Failed to enrich discussions with illustrations from related areas.	3. Showed evidence of broad cultural background in science, art, literature, history, etc.
4. Showed little evidence of breadth of cultural background in such areas as science, arts, literature, and history.	4. Gave satisfying, complete, and accurate answers to questions.
5. Answers to pupils' questions incomplete or inaccurate.	5. Was constructively critical in approach to subject matter.
6. Noncritical approach to subject.	

	X	SD	N	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
National Teacher Examination																														
1. C. S.	5.50	0.97	56	1000	208	163	259	317	166	071	715	509	621	632	640	188	274	233	262	190	118	278	-298	158	364	-025	177	020	129	-621
2. L. & P. A.	5.78	0.85	56		1000	181	326	438	474	463	790	647	917	930	981	256	336	033	265	271	240	231	-304	144	-169	027	-51	198	-065	-638
3. Science	5.75	0.94	51			1000	337	467	432	368	682	857	75	662	653	282	311	340	387	-045	318	-263	-183	218	251	053	-265	-069	077	-275
4. Math	5.67	0.93	51				1000	216	431	453	755	761	652	608	662	145	408	229	-002	-208	035	-261	261	092	215	-051	-208	-081	-065	-006
5. Teach. Area Exam.	140.00	17.16	52					1000	501	221	311	604	666	529	960	306	294	193	036	011	220	-012	020	169	-004	-056	-260	164	-016	-478
6. Prof. Ed. Test	217.00	31.70	51						1000	583	528	562	71	888	889	453	369	810	378	-082	-086	036	-033	141	278	-033	-129	336	077	-166
7. Written English	55.00	8.05	51							1000	532	506	543	678	589	248	026	069	026	-0.0	-086	518	-159	152	359	-035	-236	093	622	002
8. S. S., LT, P. A.	53.62	8.15	51								1000	667	804	768	810	406	192	282	293	259	188	276	-283	125	367	364	-351	138	001	-187
9. Sci. & Math	56.99	9.21	51									1000	875	888	733	269	427	133	188	-069	077	-017	-178	196	132	035	-248	-050	025	-216
10. NT. Subtotal	336.37	42.18	51										1000	938	888	376	313	205	188	046	120	080	-217	189	338	032	-332	050	019	-201
11. NT. Common	353.37	47.69	51											1000	879	435	356	091	153	001	033	066	-156	208	209	008	-282	051	061	-193
12. Composite	1140.36	114.21	50												1000	484	314	110	117	-019	031	011	-068	182	132	-023	-317	139	041	-360
Quality Point Average																														
13. Educ. & Psy.	3.00	0.85	45													1000	186	120	-285	293	172	255	-293	309	343	212	-141	390	388	-105
14. Nat. Field	2.98	0.79	33														1000	015	179	329	286	294	137	-222	032	069	099	133	052	-309
15. Overal.	2.92	0.70	50															1000	032	109	091	056	251	036	096	204	-159	230	196	283
Principal Evaluat. R																														
16. I	4.12	0.72	50																1000	679	721	713	-134	171	119	533	994	-250	281	998
17. II	4.16	0.84	50																	1000	783	770	-155	402	299	560	138	192	501	121
18. III	4.23	0.72	48																		1000	781	-100	-200	-062	055	026	-298	-130	082
19. IV	4.14	0.71	49																			1000	-108	391	332	678	-008	-006	367	066
20. P-Scale	112.66	9.13	44																				1000	-175	-257	-237	293	-020	-230	-132
Student Evaluation of Teaching																														
21. I	345.04	41.02	28																					1000	109	651	-082	437	889	091
22. II	350.32	38.32	28																						1000	268	378	-064	536	11.
23. III	353.54	41.92	28																							1000	-068	608	880	238
24. IV	307.11	36.72	28																								1000	-516	178	383
25. V	336.21	41.70	28																									1000	690	045
26. VI	316.37	28.37	28																										1000	220
Interaction Analysis																														
27. I/D	0.79	0.15	45																											1000
28. I/C	1.58	1.97	45																											
29. PP/YY	0.59	0.57	45																											
30. SI/Tot	0.45	0.93	45																											
31. Lec/Tot	0.48	0.20	45																											
Classroom Observation Record																														
32. 1	6.02	0.88	49																											
33. 2	5.84	0.87	49																											
34. 3	5.61	1.02	49																											
35. 4	5.20	1.22	49																											
36. 5	6.16	0.79	49																											
37. 6	5.78	0.99	49																											
38. 7	6.10	0.90	49																											
39. 8	6.18	0.93	49																											
40. 9	6.24	0.66	49																											
41. 10	5.79	1.25	48																											
42. 11	5.48	1.29	48																											
43. 12	6.16	0.78	49																											
44. 13	6.29	0.71	49																											
45. 14	6.31	1.00	49																											
46. 15	5.94	0.99	49																											
47. 16	6.14	0.94	49																											
48. 17	5.88	1.05	49																											
49. 18	6.12	1.01	49																											
50. 19	5.82	1.13	49																											
51. 20	5.83	1.07	49																											
52. 21	6.08	0.87	49																											
53. 22	5.90	0.83	48																											
54. Years Exp	2.38	2.23	57																											
55. Grade Level	(6-5-4 Mean)		53																											

*Underlining indicates a correlation significant at or beyond the .05 level.

N varies from that of the other tables because of omissions of complete data.

Decimal points omitted from correlations.